FUNAI

SERVICE MANUAL

This Service Manual is for the LED40-H9200M (A13P0EP) model.
For the LED40-H9200M (A13P0EP) model, the letter (A13P0EP) is printed on the Serial Number Label on the back of the unit. Refer to the Serial Number Label below.

Serial No. Label

40″ COLOR LCD TELEVISION

LED40-H9200M

40″ COLOR LCD TELEVISION

LED40-H9200M

TABLE OF CONTENTS

Specifications 1-1
Important Safety Precautions 2-1
Standard Notes for Servicing 3-1
Cabinet Disassembly Instructions 4-1
Electrical Adjustment Instructions 5-1
How to Initialize the LCD Television 6-1
Firmware Renewal Mode 7-1
Troubleshooting 8-1
Block Diagrams 9-1
Schematic Diagrams / CBA and Test Points 10-1
Waveforms 11-1
Wiring Diagram 12-1
Exploded View 13-1
Mechanical Parts List 14-1
Electrical Parts List 15-1

The LCD panel is manufactured to provide many years of useful life. Occasionally a few non active pixels may appear as a tiny spec of color. This is not to be considered a defect in the LCD screen.

SPECIFICATIONS

< TUNER >

VHS/UHF Input ---------- 75Ω unbal., IEC Connector
Center IF ---------- SECAM-L 38.9MHz, SECAM-L' 33.9MHz

Description	Condition	Unit	Nominal	Limit
1. Video S/N	80	dB	---	40
2. Audio S/N	---	dB	---	40/40

< LCD PANEL >

Description	Condition	Unit	Nominal	Limit
1. Number of Pixels	Horizontal Vertical	pixels pixels	1366 768	--- ---
2. Viewing Angle	Horizontal Vertical	° °	-85 to 85 -80 to 80	-75 to 75 -70 to 70

<DVB-T>

Description	Condition	Unit	Nominal	Limit
1. RECEIVED FREQ.RANGE (-60dBm, 45ch.) *1, *2	+ -	kHz kHz	1000 900	500 167
2. INPUT DYNAMIC RANGE (mix./max)	①:*1 VHF HIGH 8ch. UHF 45ch.	dBuV dBuV	25/101 25/101	28/98 29/98
	②:*2 VHF HIGH 8ch. UHF 45ch.	dBuV dBuV	18/101 18/101	21/98 21/98
3. C/N PERFORMANCE (-50dBm)	①:*1 VHF HIGH 8ch. UHF 45ch.	dB dB	15 15	≦18 ≦18
	②:*2 VHF HIGH 8ch. UHF 45ch.	dB dB	11 11	≦14 ≦14
4. MULTIPATH (-50dBm) a. Performance with short delay echoes b. Performance with long delay echoes	UHF 45ch. ①:*3 ②:*4 ①:*3 ②:*4	 dB dB dB dB	 18.7 14.0 19.1 13.0	 ≦23 ≦20 ≦23 ≦18

*1: modulation parameters = [8k 64QAM CR=2/3 GI=1/32]
*2: modulation parameters = [8k 16QAM CR=3/4 GI=1/8]
*3: modulation parameters = [2k 64QAM CR=2/3 GI=1/32]
*4: modulation parameters = [2k 16QAM CR=3/4 GI=1/32]

< VIDEO >

Description	Condition	Unit	Nominal	Limit
1. Over Scan	Horizontal Vertical	% %	5 5	--- ---
2. Color Temperature	AT 70% WHITE FIELD x y	°K	12000 0.272 0.278	--- ±0.008 ±0.008
3. Resolution	Horizontal Vertical	line line	400 350	--- ---
4. Brightness	AT 100% WHITE FIELD	cd/m^2	400	350

< AUDIO >

All items are measured across 16 Ω load at speaker output terminal.

Description	Condition	Unit	Nominal	Limit
1. Audio Output Power	10% THD: Lch/Rch	W	10/10	9/9
2. Audio Distortion	500mW: Lch/Rch	%	1.5/1.5	3.0/3.0
3. Audio Freq. Response	−6dB: Lch −6dB: Rch	Hz Hz	--- ---	--- ---
4. Audio S/N	Lch/Rch	dB	---	≧45/45

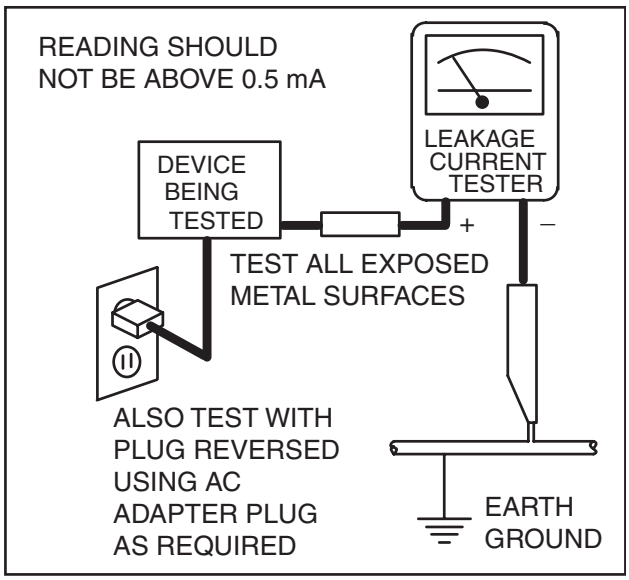
Note: Nominal specifications represent the design specifications. All units should be able to approximate these. Some will exceed and some may drop slightly below these specifications. Limit specifications represent the absolute worst condition that still might be considered acceptable. In no case should a unit fail to meet limit specifications.

IMPORTANT SAFETY PRECAUTIONS

Prior to shipment from the factory, our products are strictly inspected for recognized product safety and electrical codes of the countries in which they are to be sold. However, in order to maintain such compliance, it is equally important to implement the following precautions when a set is being serviced.

Safety Precautions for LCD TV Circuit

1. **Before returning an instrument to the customer,** always make a safety check of the entire instrument, including, but not limited to, the following items:
   - **a.** Be sure that no built-in protective devices are defective and have been defeated during servicing. (1) Protective shields are provided on this chassis to protect both the technician and the customer. Correctly replace all missing protective shields, including any removed for servicing convenience. (2) When reinstalling the chassis and/or other assembly in the cabinet, be sure to put back in place all protective devices, including but not limited to, nonmetallic control knobs, insulating fishpapers, adjustment and compartment covers/shields, and isolation resistor/capacitor networks. **Do not operate this instrument or permit it to be operated without all protective devices correctly installed and functioning. Servicers who defeat safety features or fail to perform safety checks may be liable for any resulting damage.**
   - **b.** Be sure that there are no cabinet openings through which an adult or child might be able to insert their fingers and contact a hazardous voltage. Such openings include, but are not limited to, (1) spacing between the LCD module and the cabinet mask, (2) excessively wide cabinet ventilation slots, and (3) an improperly fitted and/or incorrectly secured cabinet back cover.
   - **c. Antenna Cold Check -** With the instrument AC plug removed from any AC source, connect an electrical jumper across the two AC plug prongs. Place the instrument AC switch in the on position. Connect one lead of an ohmmeter to the AC plug prongs tied together and touch the other ohmmeter lead in turn to each tuner antenna input exposed terminal screw and, if applicable, to the coaxial connector. If the measured resistance is less than 1.0 megohm or greater than 5.2 megohm, an abnormality exists that must be corrected before the instrument is returned to the customer. Repeat this test with the instrument AC switch in the off position.
   - **d. Leakage Current Hot Check -** With the instrument completely reassembled, plug the AC line cord directly into a 230 V AC outlet. (Do not use an isolation transformer during this test.) Use a leakage current tester or a metering system that complies with American National Standards Institute (ANSI) C101.1 Leakage Current for Appliances and Underwriters Laboratories (UL) 1410, (50.7). With the instrument AC switch first in the on position and then in the off position, measure from a known earth ground (metal water pipe, conduit, etc.) to all exposed metal parts of the instrument (antennas, handle brackets, metal cabinet, screw heads, metallic overlays, control shafts, etc.), especially any exposed metal parts that offer an electrical return path to the chassis. Any current measured must not exceed 0.5 milli-ampere. Reverse the instrument power cord plug in the outlet and repeat the test.



ANY MEASUREMENTS NOT WITHIN THE LIMITS SPECIFIED HEREIN INDICATE A POTENTIAL SHOCK HAZARD THAT MUST BE ELIMINATED BEFORE RETURNING THE INSTRUMENT TO THE CUSTOMER OR BEFORE CONNECTING THE ANTENNA OR ACCESSORIES.

2. Read and comply with all caution and safety-related notes on or inside the receiver cabinet, on the receiver chassis, or on the LCD module.
3. **Design Alteration Warning -** Do not alter or add to the mechanical or electrical design of this LCD TV receiver. Design alterations and additions, including, but not limited to circuit modifications and the addition of items such as auxiliary audio and/or video output connections, might alter the safety characteristics of this receiver and create a hazard to the user. Any design alterations or additions will void the manufacturer's warranty and may make you, the servicer, responsible for personal injury or property damage resulting therefrom.

4. **Hot Chassis Warning -**
   a. Some TV receiver chassis are electrically connected directly to one conductor of the AC power cord and maybe safety-serviced without an isolation transformer only if the AC power plug is inserted so that the chassis is connected to the ground side of the AC power source. To confirm that the AC power plug is inserted correctly, with an AC voltmeter, measure between the chassis and a known earth ground. If a voltage reading in excess of 1.0 V is obtained, remove and reinsert the AC power plug in the opposite polarity and again measure the voltage potential between the chassis and a known earth ground.
   b. Some TV receiver chassis normally have 85V AC(RMS) between chassis and earth ground regardless of the AC plug polarity. This chassis can be safety-serviced only with an isolation transformer inserted in the power line between the receiver and the AC power source, for both personnel and test equipment protection.
   c. Some TV receiver chassis have a secondary ground system in addition to the main chassis ground. This secondary ground system is not isolated from the AC power line. The two ground systems are electrically separated by insulation material that must not be defeated or altered.
5. Observe original lead dress. Take extra care to assure correct lead dress in the following areas: a. near sharp edges, b. near thermally hot parts-be sure that leads and components do not touch thermally hot parts, c. the AC supply, d. high voltage, and, e. antenna wiring. Always inspect in all areas for pinched, out of place, or frayed wiring. Check AC power cord for damage.
6. Components, parts, and/or wiring that appear to have overheated or are otherwise damaged should be replaced with components, parts, or wiring that meet original specifications. Additionally, determine the cause of overheating and/or damage and, if necessary, take corrective action to remove any potential safety hazard.
7. **Product Safety Notice -** Some electrical and mechanical parts have special safety-related characteristics which are often not evident from visual inspection, nor can the protection they give necessarily be obtained by replacing them with components rated for higher voltage, wattage, etc.. Parts that have special safety characteristics are identified by a ⚠ on schematics and in parts lists. Use of a substitute replacement that does not have the same safety characteristics as the recommended replacement part might create shock, fire, and/or other hazards. The product's safety is under review continuously and new instructions are issued whenever appropriate. Prior to shipment from the factory, our products are strictly inspected to confirm they comply with the recognized product safety and electrical codes of the countries in which they are to be sold. However, in order to maintain such compliance, it is equally important to implement the following precautions when a set is being serviced.

Precautions during Servicing

A. Parts identified by the ⚠ symbol are critical for safety.
Replace only with part number specified.

B. In addition to safety, other parts and assemblies are specified for conformance with regulations applying to spurious radiation. These must also be replaced only with specified replacements.
Examples: RF converters, RF cables, noise blocking capacitors, and noise blocking filters, etc.

C. Use specified internal wiring. Note especially:

1) Wires covered with PVC tubing
2) Double insulated wires
3) High voltage leads

D. Use specified insulating materials for hazardous live parts. Note especially:

1) Insulation Tape
2) PVC tubing
3) Spacers
4) Insulators for transistors.

E. When replacing AC primary side components (transformers, power cord, etc.), wrap ends of wires securely about the terminals before soldering.

F. Observe that the wires do not contact heat producing parts (heat sinks, oxide metal film resistors, fusible resistors, etc.)

G. Check that replaced wires do not contact sharp edged or pointed parts.

H. When a power cord has been replaced, check that 5~6 kg of force in any direction will not loosen it.

I. Also check areas surrounding repaired locations.

J. Use care that foreign objects (screws, solder droplets, etc.) do not remain inside the set.

K. When connecting or disconnecting the internal connectors, first, disconnect the AC plug from the AC supply outlet.

L. When installing parts or assembling the cabinet parts, be sure to use the proper screws and tighten certainly.

Safety Check after Servicing

Examine the area surrounding the repaired location for damage or deterioration. Observe that screws, parts and wires have been returned to original positions. Afterwards, perform the following tests and confirm the specified values in order to verify compliance with safety standards.

1. Clearance Distance

When replacing primary circuit components, confirm specified clearance distance (d) and (d') between soldered terminals, and between terminals and surrounding metallic parts. (See Fig. 1)

Table 1 : Ratings for selected area

AC Line Voltage	Clearance Distance (d), (d')
220 to 240 V	≥ 3mm(d) ≥ 8mm(d')

Note: This table is unofficial and for reference only. Be sure to confirm the precise values.

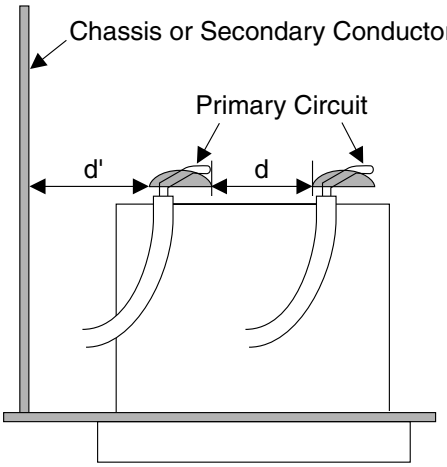


Fig. 1

2. Leakage Current Test

Confirm the specified (or lower) leakage current between B (earth ground, power cord plug prongs) and externally exposed accessible parts (RF terminals, antenna terminals, video and audio input and output terminals, microphone jacks, earphone jacks, etc.).

Measuring Method : (Power ON)

Insert load Z between B (earth ground, power cord plug prongs) and exposed accessible parts. Use an AC voltmeter to measure across both terminals of load Z. See Fig. 2 and following table.

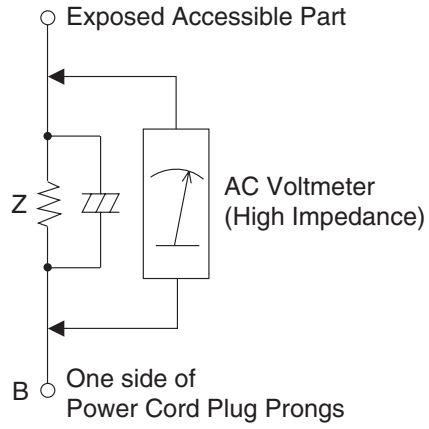


Fig. 2

Table 2: Leakage current ratings for selected areas

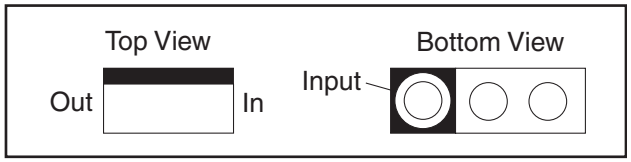
AC Line Voltage	Load Z	Leakage Current (i)	One side of power cord plug prongs (B) to:
220 to 240 V	2kΩ RES. Connected in parallel	i≤0.7mA AC Peak i≤2mA DC	RF or Antenna terminals
	50kΩ RES. Connected in parallel	i≤0.7mA AC Peak i≤2mA DC	A/V Input, Output

Note: This table is unofficial and for reference only. Be sure to confirm the precise values.

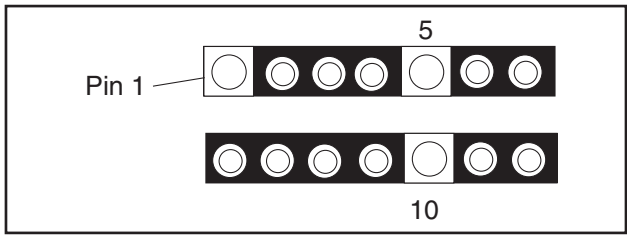
STANDARD NOTES FOR SERVICING

Circuit Board Indications

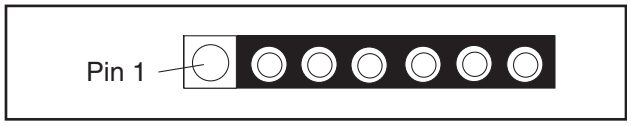
1. The output pin of the 3 pin Regulator ICs is indicated as shown.



2. For other ICs, pin 1 and every fifth pin are indicated as shown.

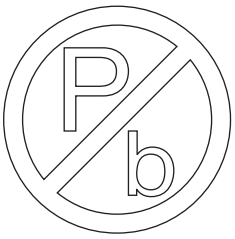


3. The 1st pin of every male connector is indicated as shown.



Pb (Lead) Free Solder

Pb free mark will be found on PCBs which use Pb free solder. (Refer to figure.) For PCBs with Pb free mark, be sure to use Pb free solder. For PCBs without Pb free mark, use standard solder.



Pb free mark

How to Remove / Install Flat Pack-IC

1. Removal

With Hot-Air Flat Pack-IC Desoldering Machine:

1. Prepare the hot-air flat pack-IC desoldering machine, then apply hot air to the Flat Pack-IC (about 5 to 6 seconds). (Fig. S-1-1)

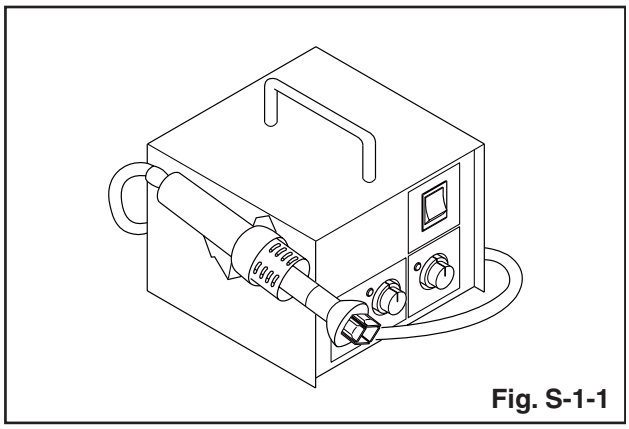


Fig. S-1-1

2. Remove the flat pack-IC with tweezers while applying the hot air.
3. Bottom of the flat pack-IC is fixed with glue to the CBA; when removing entire flat pack-IC, first apply soldering iron to center of the flat pack-IC and heat up. Then remove (glue will be melted). (Fig. S-1-6)
4. Release the flat pack-IC from the CBA using tweezers. (Fig. S-1-6)

CAUTION:

1. The Flat Pack-IC shape may differ by models. Use an appropriate hot-air flat pack-IC desoldering machine, whose shape matches that of the Flat Pack-IC.
2. Do not supply hot air to the chip parts around the flat pack-IC for over 6 seconds because damage to the chip parts may occur. Put masking tape around the flat pack-IC to protect other parts from damage. (Fig. S-1-2)
3. The flat pack-IC on the CBA is affixed with glue, so be careful not to break or damage the foil of each pin or the solder lands under the IC when removing it.

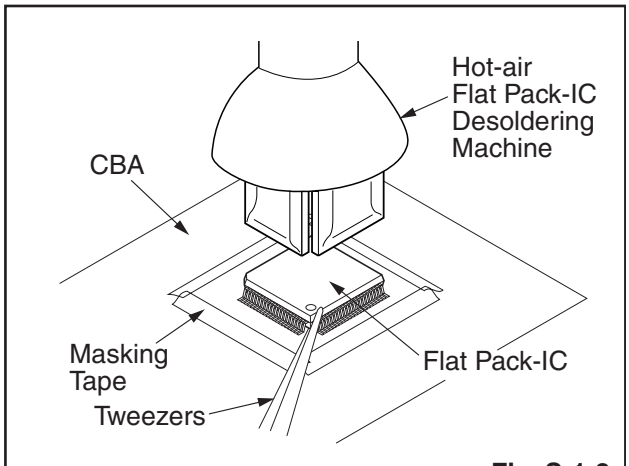


Fig. S-1-2

With Soldering Iron:

1. Using desoldering braid, remove the solder from all pins of the flat pack-IC. When you use solder flux which is applied to all pins of the flat pack-IC, you can remove it easily. (Fig. S-1-3)

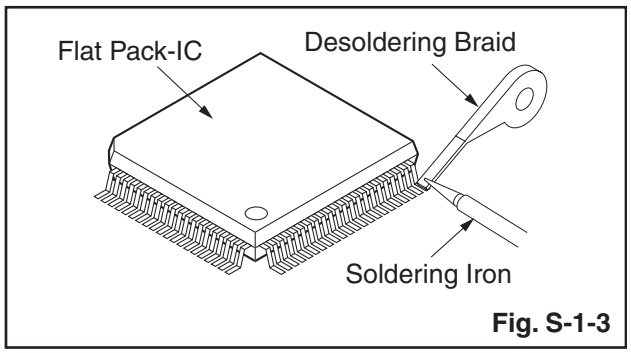


Fig. S-1-3

2. Lift each lead of the flat pack-IC upward one by one, using a sharp pin or wire to which solder will not adhere (iron wire). When heating the pins, use a fine tip soldering iron or a hot air desoldering machine. (Fig. S-1-4)

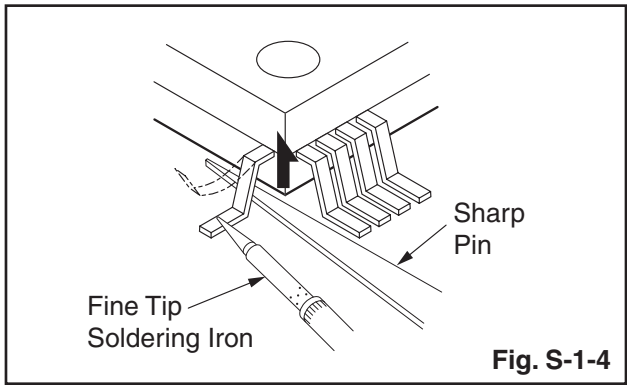


Fig. S-1-4

3. Bottom of the flat pack-IC is fixed with glue to the CBA; when removing entire flat pack-IC, first apply soldering iron to center of the flat pack-IC and heat up. Then remove (glue will be melted). (Fig. S-1-6)
4. Release the flat pack-IC from the CBA using tweezers. (Fig. S-1-6)

With Iron Wire:

1. Using desoldering braid, remove the solder from all pins of the flat pack-IC. When you use solder flux which is applied to all pins of the flat pack-IC, you can remove it easily. (Fig. S-1-3)
2. Affix the wire to a workbench or solid mounting point, as shown in Fig. S-1-5.
3. While heating the pins using a fine tip soldering iron or hot air blower, pull up the wire as the solder melts so as to lift the IC leads from the CBA contact pads as shown in Fig. S-1-5.
4. Bottom of the flat pack-IC is fixed with glue to the CBA; when removing entire flat pack-IC, first apply soldering iron to center of the flat pack-IC and heat up. Then remove (glue will be melted). (Fig. S-1-6)
5. Release the flat pack-IC from the CBA using tweezers. (Fig. S-1-6)

Note: When using a soldering iron, care must be taken to ensure that the flat pack-IC is not being held by glue. When the flat pack-IC is removed from the CBA, handle it gently because it may be damaged if force is applied.

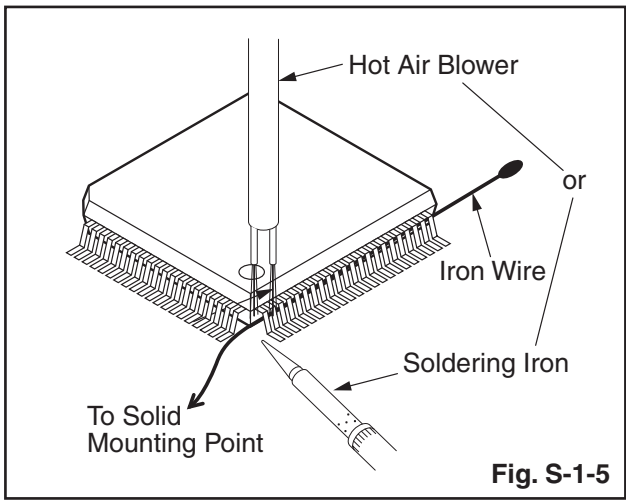


Fig. S-1-5

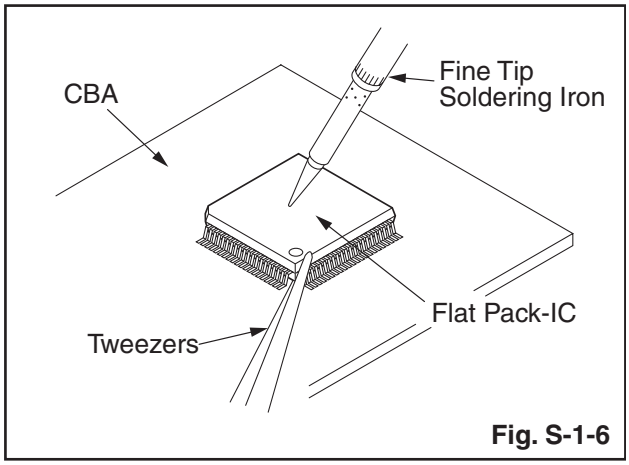


Fig. S-1-6

2. Installation

1. Using desoldering braid, remove the solder from the foil of each pin of the flat pack-IC on the CBA so you can install a replacement flat pack-IC more easily.
2. The "●" mark on the flat pack-IC indicates pin 1. (See Fig. S-1-7.) Be sure this mark matches the pin 1 on the PCB when positioning for installation. Then presolder the four corners of the flat pack-IC. (See Fig. S-1-8.)
3. Solder all pins of the flat pack-IC. Be sure that none of the pins have solder bridges.

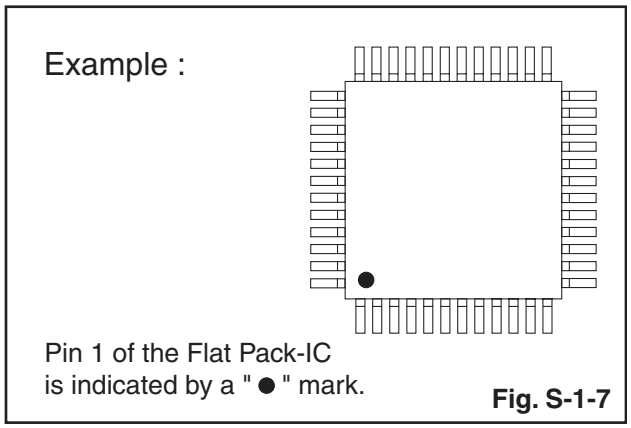


Fig. S-1-7

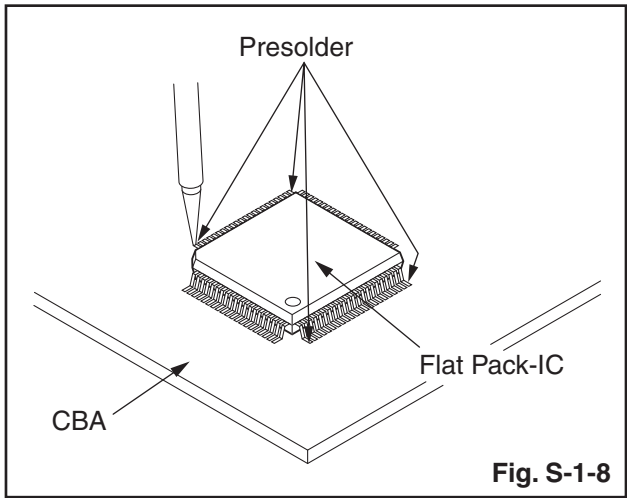


Fig. S-1-8

Instructions for Handling Semi-conductors

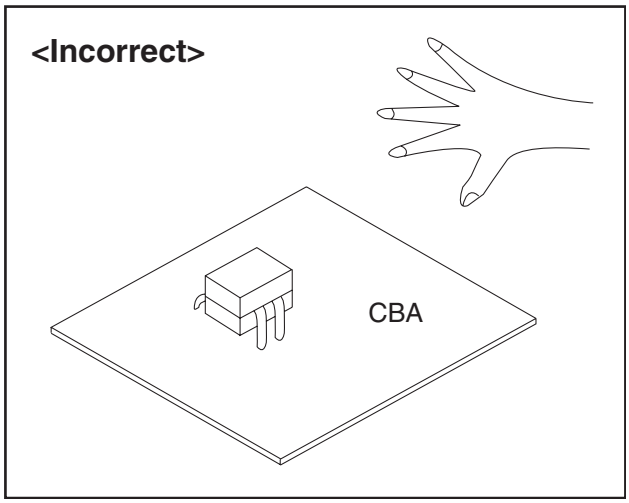
Electrostatic breakdown of the semi-conductors may occur due to a potential difference caused by electrostatic charge during unpacking or repair work.

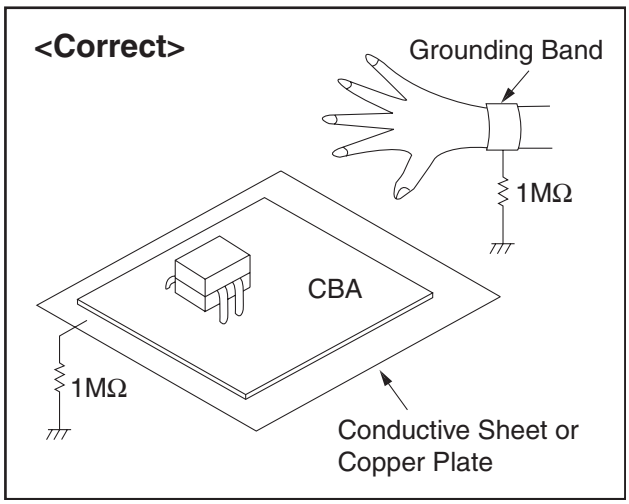
1. Ground for Human Body

Be sure to wear a grounding band (1 MΩ) that is properly grounded to remove any static electricity that may be charged on the body.

2. Ground for Workbench

Be sure to place a conductive sheet or copper plate with proper grounding (1 MΩ) on the workbench or other surface, where the semi-conductors are to be placed. Because the static electricity charge on clothing will not escape through the body grounding band, be careful to avoid contacting semi-conductors with your clothing.

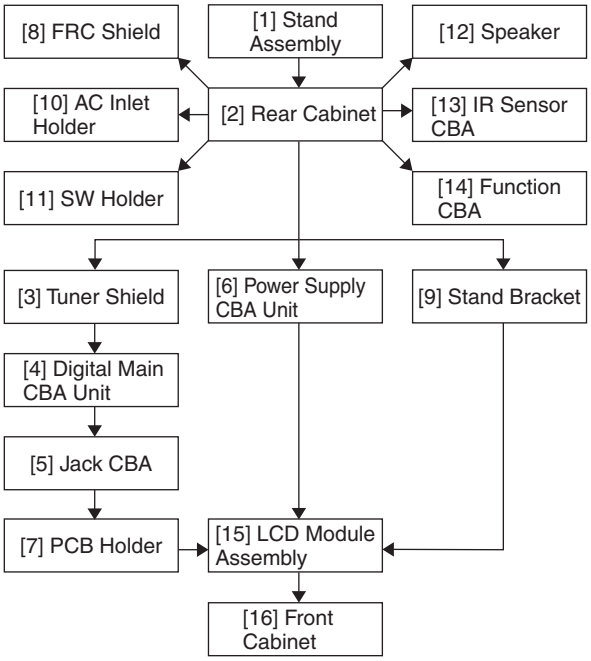




CABINET DISASSEMBLY INSTRUCTIONS

1. Disassembly Flowchart

This flowchart indicates the disassembly steps for the cabinet parts and the CBA in order to gain access to items to be serviced. When reassembling, follow the steps in reverse order. Bend, route and dress the cables as they were.



2. Disassembly Method

Step/ Loc. No.	Part	Fig. No.	Removal	Note
[1]	Stand Assembly	D1	4(S-1)	---
[2]	Rear Cabinet	D1	16(S-2), 4(S-3), 6(S-4), (S-5)	---
[3]	Tuner Shield	D2	(S-6), 2(S-7)	---
[4]	Digital Main CBA Unit	D2 D5	4(S-8), CN2103, CN2104, CN2105, CN3901, Shield Box, Jack Holder(D)	---
[5]	Jack CBA	D2 D5	3(S-9), CN2102, CN2602, CN2603, CN2801, CN2802, Jack Holder(A)	---
[6]	Power Supply CBA Unit	D2 D5	3(S-10), (S-11), CN1, CN4, Separation Sheet	---
[7]	PCB Holder	D3	5(S-12)	---
[8]	FRC Shield	D3	4(S-13)	---
[9]	Stand Bracket	D3	4(S-14), (S-15)	---
[10]	AC Inlet Holder	D3	2(S-16), CL602	---
[11]	SW Holder	D3	2(S-17), CL601, Switch Power	---
[12]	Speaker	D3	----------	---
[13]	IR Sensor CBA	D4 D5	CN2161, Sensor LED Lens	---
[14]	Function CBA	D4 D5	Function Knob(Low)	---
[15]	LCD Module Assembly	D4	Sensor Shield	---
[16]	Front Cabinet	D4	----------	---
↓ (1)	↓ (2)	↓ (3)	↓ (4)	↓ (5)

Note:

(1) Order of steps in procedure. When reassembling, follow the steps in reverse order. These numbers are also used as the Identification (location) No. of parts in figures.

(2) Parts to be removed or installed.

(3) Fig. No. showing procedure of part location

(4) Identification of parts to be removed, unhooked, unlocked, released, unplugged, unclamped, or desoldered.
N = Nut, L = Locking Tab, S = Screw,
H = Hex Screw, CN = Connector
e.g. 2(S-2) = two Screws of (S-2),
2(L-2) = two Locking Tabs of (L-2)

(5) Refer to the following "Reference Notes in the Table."

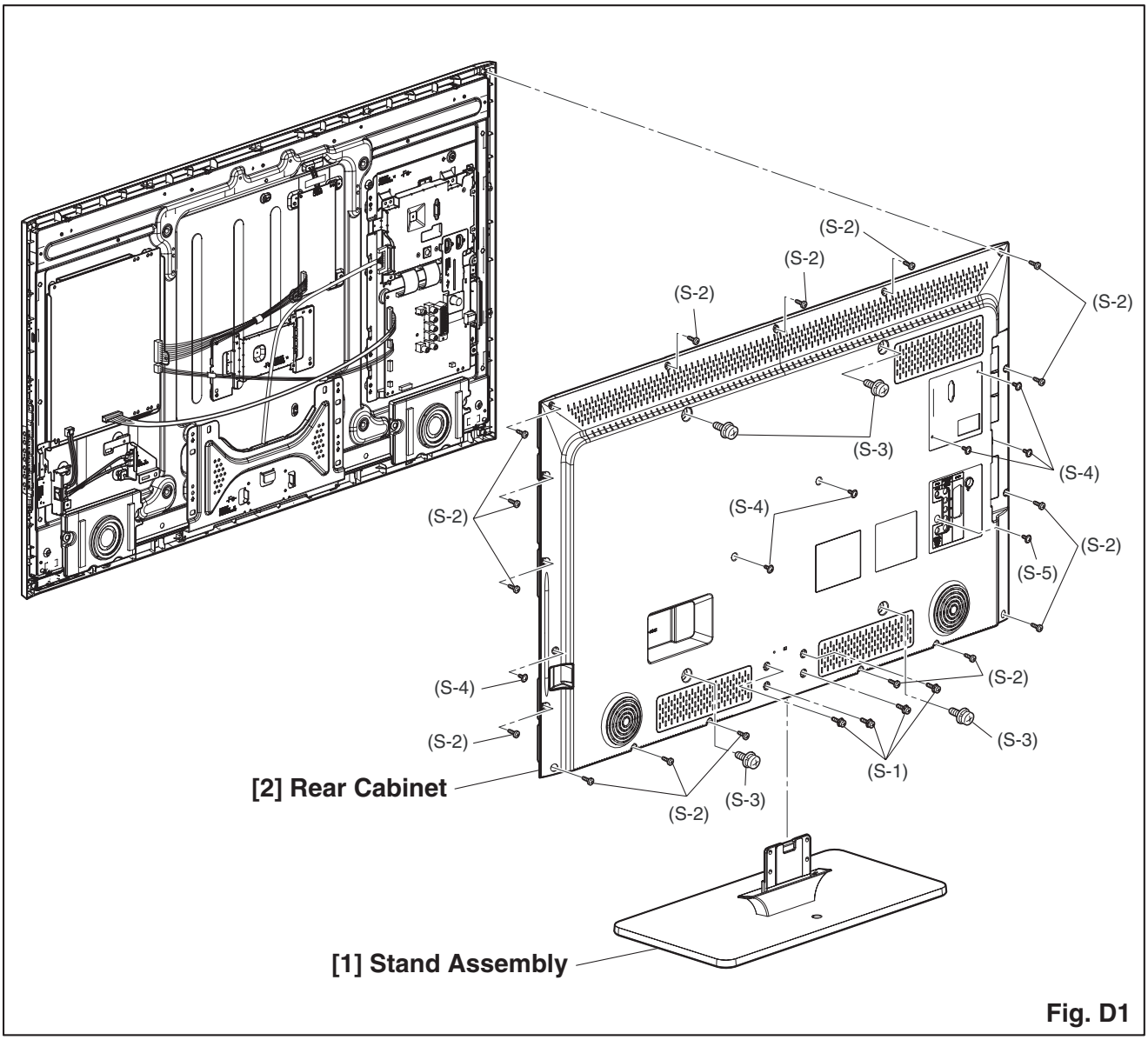

(S-2)
(S-2)
(S-2)
(S-2)
(S-3)
(S-4)
(S-4)
(S-2)
(S-5)
(S-2)
(S-4)
(S-2)
(S-2)
(S-3)
(S-1)
(S-3)
(S-2)
[2] Rear Cabinet
[1] Stand Assembly

Fig. D1

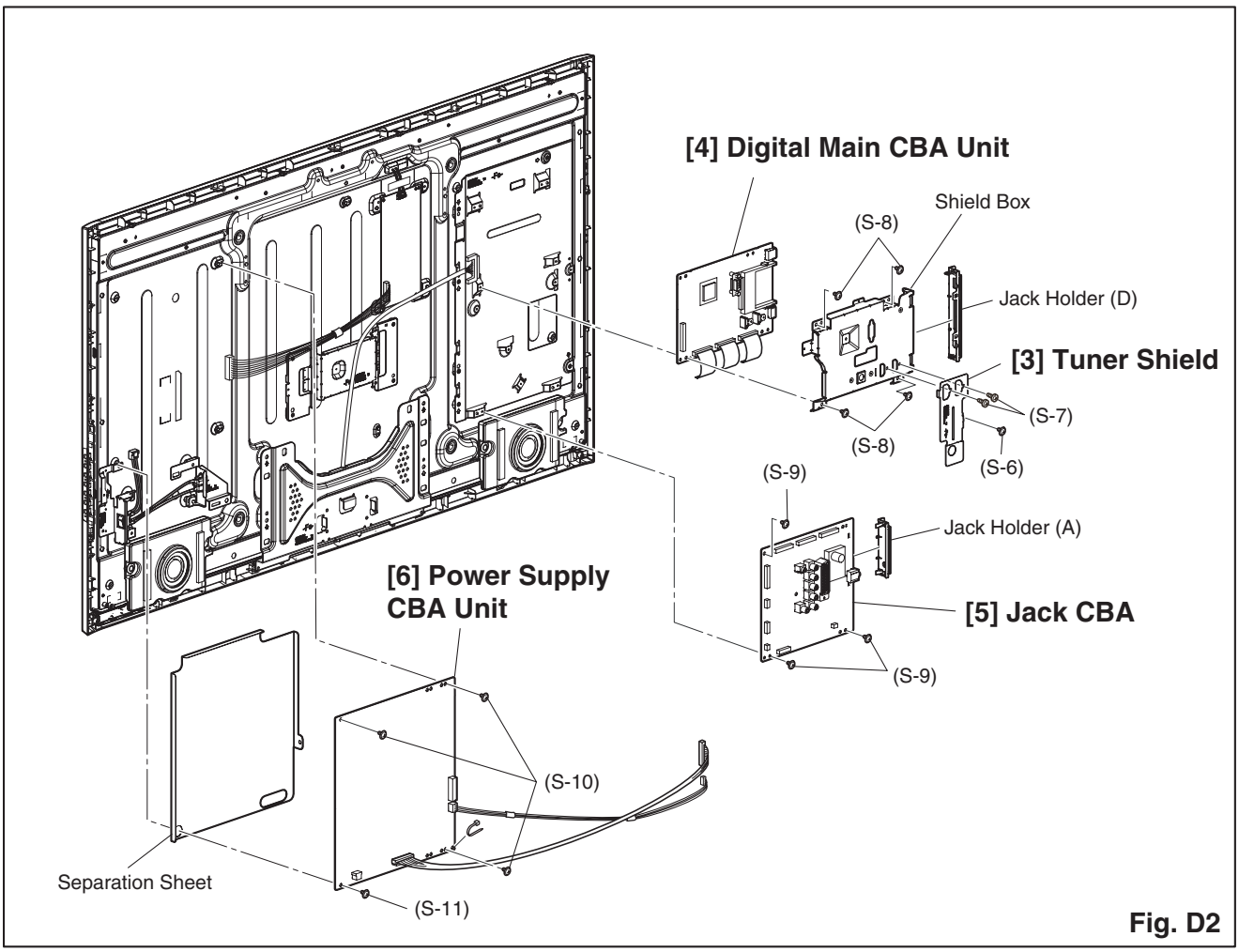

[4] Digital Main CBA Unit
Shield Box
(S-8)
Jack Holder (D)
[3] Tuner Shield
(S-7)
(S-8)
(S-6)
(S-9)
Jack Holder (A)
[6] Power Supply
CBA Unit
[5] Jack CBA
(S-9)
(S-10)
Separation Sheet
(S-11)

Fig. D2

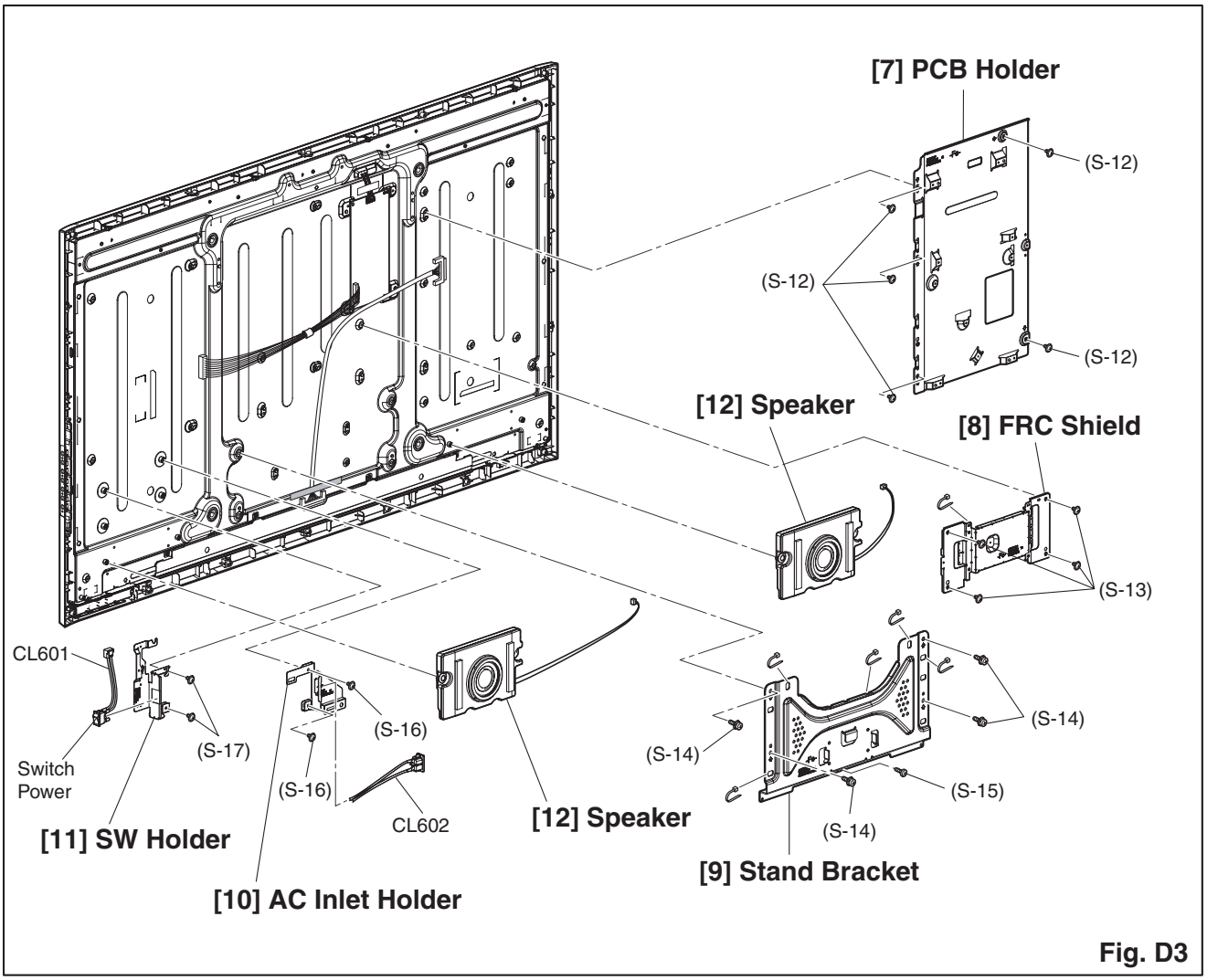

[7] PCB Holder
(S-12)
(S-12)
(S-12)
[12] Speaker
[8] FRC Shield
(S-13)
CL601
(S-16)
(S-17)
Switch
Power
(S-16)
CL602
[12] Speaker
(S-14)
(S-14)
(S-14)
(S-15)
[11] SW Holder
[10] AC Inlet Holder
[9] Stand Bracket

Fig. D3

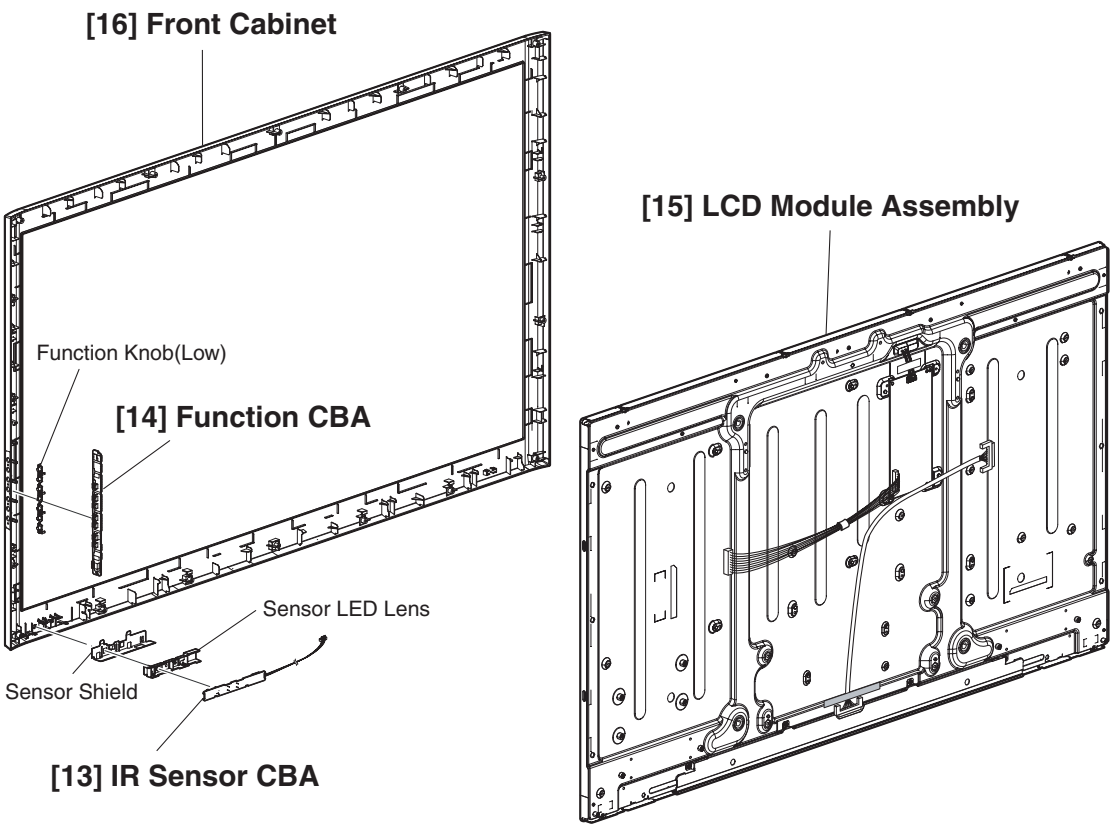

[16] Front Cabinet
[15] LCD Module Assembly
Function Knob(Low)
[14] Function CBA
Sensor LED Lens
Sensor Shield
[13] IR Sensor CBA

Fig. D4

TV Cable Wiring Diagram

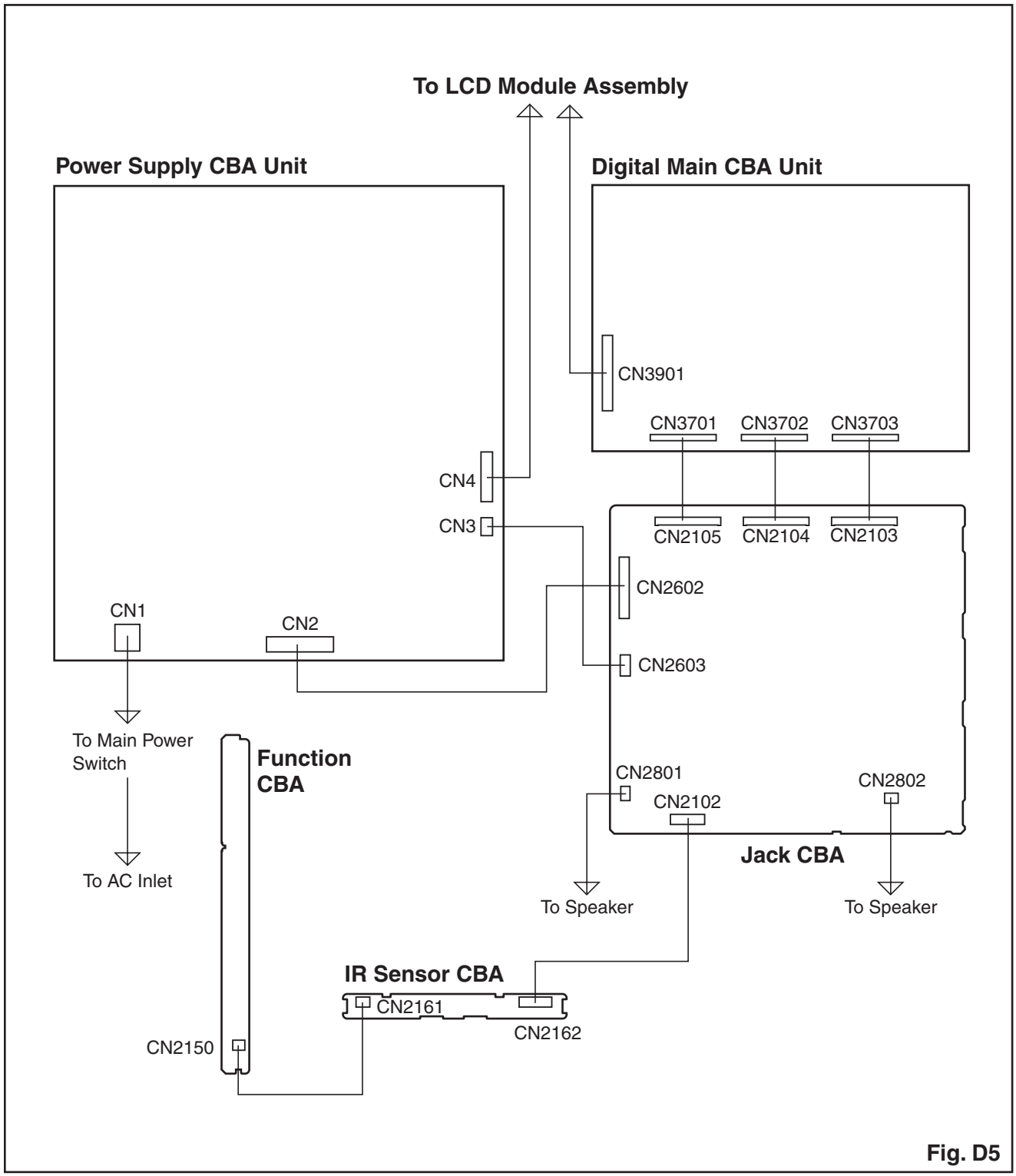


Fig. D5

ELECTRICAL ADJUSTMENT INSTRUCTIONS

General Note: “CBA” is abbreviation for “Circuit Board Assembly.”

Note: Electrical adjustments are required after replacing circuit components and certain mechanical parts. It is important to perform these adjustments only after all repairs and replacements have been completed.
Also, do not attempt these adjustments unless the proper equipment is available.

Test Equipment Required

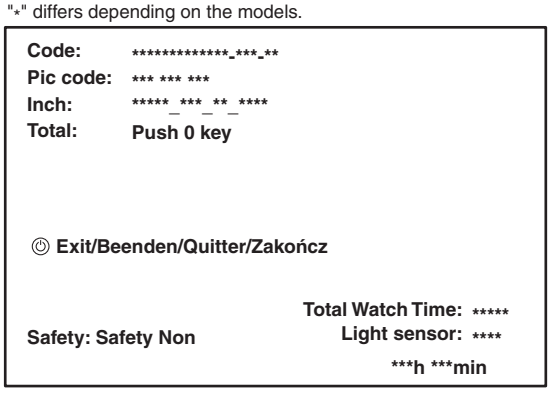
1. Remote control unit
2. Color Analyzer,
   CA-310 (KONICA MINOLTA Luminance meter) or measuring instrument as good as CA-310.

How to set up the service mode:

Service mode:

1. Turn the power on.
2. Press [MENU] button to display Setup menu.
3. Select “Software” in “OTHERS” and press [OK] button.
4. Press [0], [4], [2], [5], [7], [4] and [i] buttons on the remote control unit in this order. The following screen appears.

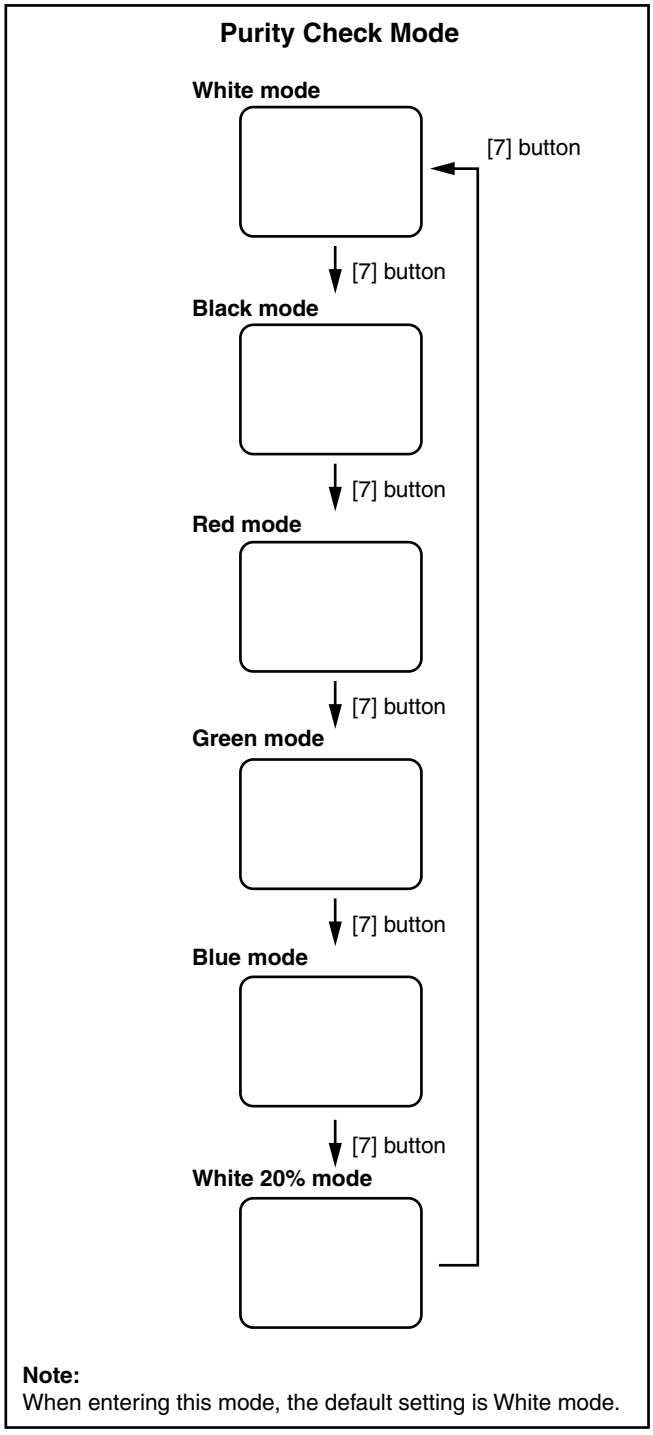
"⁎" differs depending on the models.



1. Purity Check Mode

This mode cycles through full-screen displays of red, green, blue, and white to check for non-active pixels.

1. Enter the Service mode.
2. Each time the [7] button on the remote control unit is pressed, the display changes as follows.



3. To cancel or to exit from the Purity Check Mode, press [BACK] button.

The White Balance Adjustment should be performed when replacing the LCD Panel or Digital Main CBA.

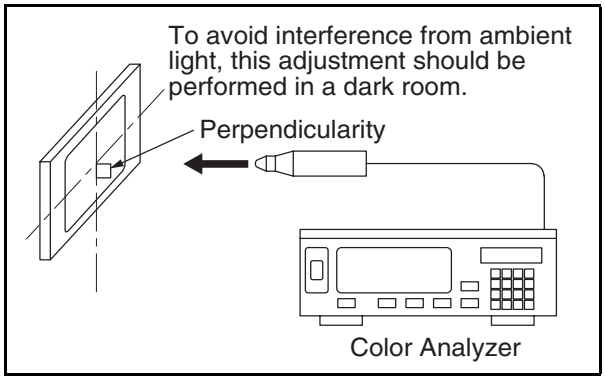
2. White Balance Adjustment

Purpose: To mix red and blue beams correctly for pure white.

Symptom of Misadjustment: White becomes bluish or reddish.

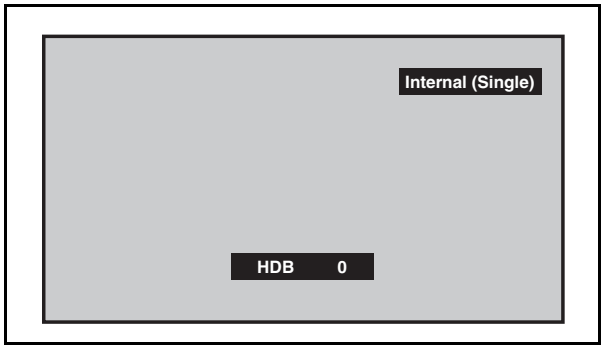
ITEM	SPECIFICATION
Color temperature	x= 0.272 ± 0.002 y= 0.278 ± 0.002
Input Signal	Internal pattern (40/70% raster)
Measurement point	Screen center
M. EQ.	CA-310 (KONICA MINOLTA Luminance meter) or measuring instrument as good as CA-310.
Aging time	60min. (Retail MODE/100IRE Raster HDMI 1080i@60)
MODE setting of TV	Shipment setting/ Retail MODE
Ambient temperature	25°C ± 5°C

1. Operate the unit for more than 60 minutes.
2. Set the color analyzer at the CHROMA mode and zero point calibration. Bring the optical receptor pointing at the center of the LCD-Panel.

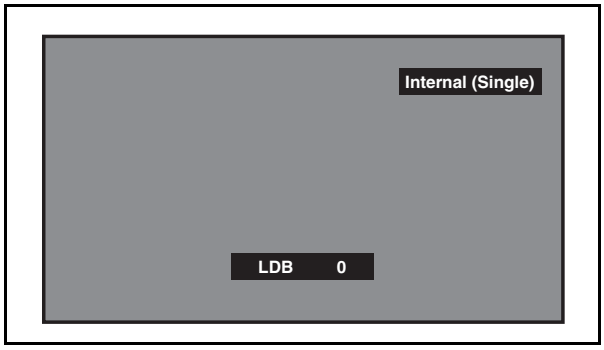

To avoid interference from ambient light, this adjustment should be performed in a dark room.
Perpendicularity
Color Analyzer

Note: The optical receptor must be set perpendicularly to the LCD Panel surface.

3. Enter the Service mode.
4. Press [-] button three times on the remote control unit to select “Drive setting” mode. “Drive” appears on the screen.
5. Press [3] button to select the “HDB” for High Drive Blue adjustment. (“HDB” appears on the screen.)
6. Press [MENU] button. The internal Raster signal appears on the screen. (“Internal (Single)” appears on the upper right of the screen as shown below.)



7. Press [P ∧ / ∨] buttons to adjust the color temperature becomes 12000°K (x= 0.272 / y= 0.278 ±0.002).
8. Press [1] button to select the “HDR” for High Drive Red adjustment (“HDR” appears on the screen.) and press [P ∧ / ∨] buttons to adjust the color temperature.
9. If necessary, adjust the “HDB” or “HDR” again.
10. Press [6] button to select the “LDB” for Low Drive Blue adjustment (“LDB” appears on the screen.) and press [P ∧ / ∨] buttons to adjust the color temperature.



11. Press [4] button to select the “LDR” for Low Drive Red adjustment (“LDR” appears on the screen.) and press [P ∧ / ∨] buttons to adjust the color temperature.
12. If necessary, adjust the “LDB” or “LDR” again.
13. Press [BACK] button to enter the Service mode again.
14. Press [i] button on the remote control unit to shift to the self check mode screen.
    If “WB OK” is displayed, this adjustment completes.
    If “WB NG” is displayed, turn the AC switch (on the lower left of the back of the unit) off and on. Then repeat above steps from 3. to 13. Check the self check mode screen again. If “WB NG” is displayed, replace the LCD Panel or Digital Main CBA.
15. To cancel or to exit from the White Balance Adjustment, press [BACK] button.

HOW TO INITIALIZE THE LCD TELEVISION

How to initialize the LCD television:

1. Turn the power on.
2. Enter the service mode. (Refer to page 5-1.)
   - To cancel the service mode, press [⏻] button on the remote control unit.
3. Press [i] button on the remote control unit to initialize the LCD television.
4. After confirming that “INITIALIZED : OK” appears on the screen, turn the AC switch (on the lower left of the back of the unit) off.

FIRMWARE RENEWAL MODE

Equipment Required

a. USB storage device
b. Remote Control Unit

Firmware Update Procedure

[Check the current version]

1. Press [MENU] button on the remote control unit to display the menu mode.
2. Press [▲] or [▼] to select “Others”, then press [OK] button.
3. Press [▲] or [▼] to select “Software”, then press [OK] button.

   The current FW version will be displayed.

[Preparation]

1. Prepare USB storage device.
2. Copy F/W-file (pkg file) to USB storage device.
   Note: Make sure to use the blank USB Storage.
3. Rename the F/W-file’s name to “upgrade.pkg”.

[Update procedure]

1. Turn the AC switch (on the lower left of the back of the unit) off.
2. Insert USB storage device with F/W to TV set.
3. Turn the AC switch on.
4. Updating starts automatically. Red LED flashes.

   Note: Do not turn off the TV set and do not remove the USB storage device while this procedure.
5. When updating is completed, the TV set will turn back on automatically.
6. To shift the TV set to standby mode, press [⏻] button on the remote control unit.
7. Remove USB storage device from TV set.
8. Press [⏻] button again to turn the power on.
9. Press [MENU] button on the remote control unit to display the menu mode.
10. Select “Parental” - “PIN CODE:”.
11. Press [4], [7], [3] and [7] buttons on the remote control unit.
12. Select “Factory Reset” and press [OK] button.

TROUBLESHOOTING

FLOW CHART NO.1

The power cannot be turned on.

↓

Are the voltage of each pin of CN2602 and CN2603 become as shown below?

CN2603	3, 4PIN	+24V	AMP+24V
CN2602	11-14PIN	+12V	P-ON+12V
CN2602	6PIN	+5.3V	AL+5.3V

No → Check SW601 and their periphery circuit, and service it if defective.
Or replace Power Supply CBA Unit.

↓ Yes

Check if there is any leak or short-circuit on the loaded circuit, and service it if defective.

FLOW CHART NO.2

P-ON+3.3V is not output.

↓

Is approximately 12V voltage supplied to Pin(2) of IC2602?

No → Check F2602, P-ON+12V line and their periphery circuit, and service it if defective.

↓ Yes

Replace IC2602.

FLOW CHART NO.3

P-ON+6V is not output. (P-ON+3.3V is outputted normally.)

↓

Is approximately 12V voltage supplied to Pin(2) of IC2603?

No → Check F2603, P-ON+12V line and their periphery circuit, and service it if defective.

↓ Yes

Replace IC2603.

FLOW CHART NO.4

P-ON+5V is not output.

↓

Is approximately 6V voltage supplied to Pin(7) of IC2605?

No → See FLOW CHART NO.3 <P-ON+6V is not output. (P-ON+3.3V is outputted normally.)>

↓ Yes

Replace IC2605.

FLOW CHART NO.5

The key operation is not functioning.

↓

Are the contact point and installation state of the key switches (SW2150-SW2156) normal?

No → Re-install the switches (SW2150-SW2156) correctly or replace the poor switch.

↓ Yes

When pressing each switches (SW2150-SW2156) do the voltage of Pin(1) on CN2104 decrease?

No → Check the switches (SW2150-SW2156) and their periphery, and service it if defective.

↓ Yes

Replace Digital Main CBA Unit.

FLOW CHART NO.6

No operation is possible from the remote control unit. (Operation is possible from the unit.)

↓

Is 3.3V voltage supplied to Pin(3) of RS2161 (remote control receiver)? — No → Check AL+3.3V line and service it if defective.

↓ Yes

Is the "L" pulse sent out Pin(1) of RS2161 (remote control receiver) when the infrared remote control is activated? — No → Replace RS2161 (remote control receiver) or remote control unit.

↓ Yes

Is the "L" pulse supplied to Pin(2) of CN2104? — No → Check the line between Pin(1) of RS2161 (remote control receiver) and Pin(2) of CN2104, and service it if defective.

↓ Yes

Replace Digital Main CBA Unit.

FLOW CHART NO.7

Picture does not appear normally. (Video input/Y/Pb/Pr input/RGB input)

↓

Are the video signals outputted to the specific terminal?		Check the line between each pin of CN2104 and CN2103 and input terminal and service it if defective.
Are the component video(Y/Pb/Pr) signals outputted to Pin(18, 20, 22) of CN2104?	No →	Check the component video(Y/Pb/Pr) signal line, and service it if defective.
Are the RGB video signals outputted to Pin(1, 3, 5) of CN2103?	No →	Check the RGB video signal line, and service it if defective.
Are the composite video signals outputted to Pin(9) of CN2103?	No →	Check the composite video signal line, and service it if defective.

↓ Yes

Replace Digital Main CBA Unit or LCD Module Assembly.

FLOW CHART NO.8

Picture does not appear normally. (Tuner input)

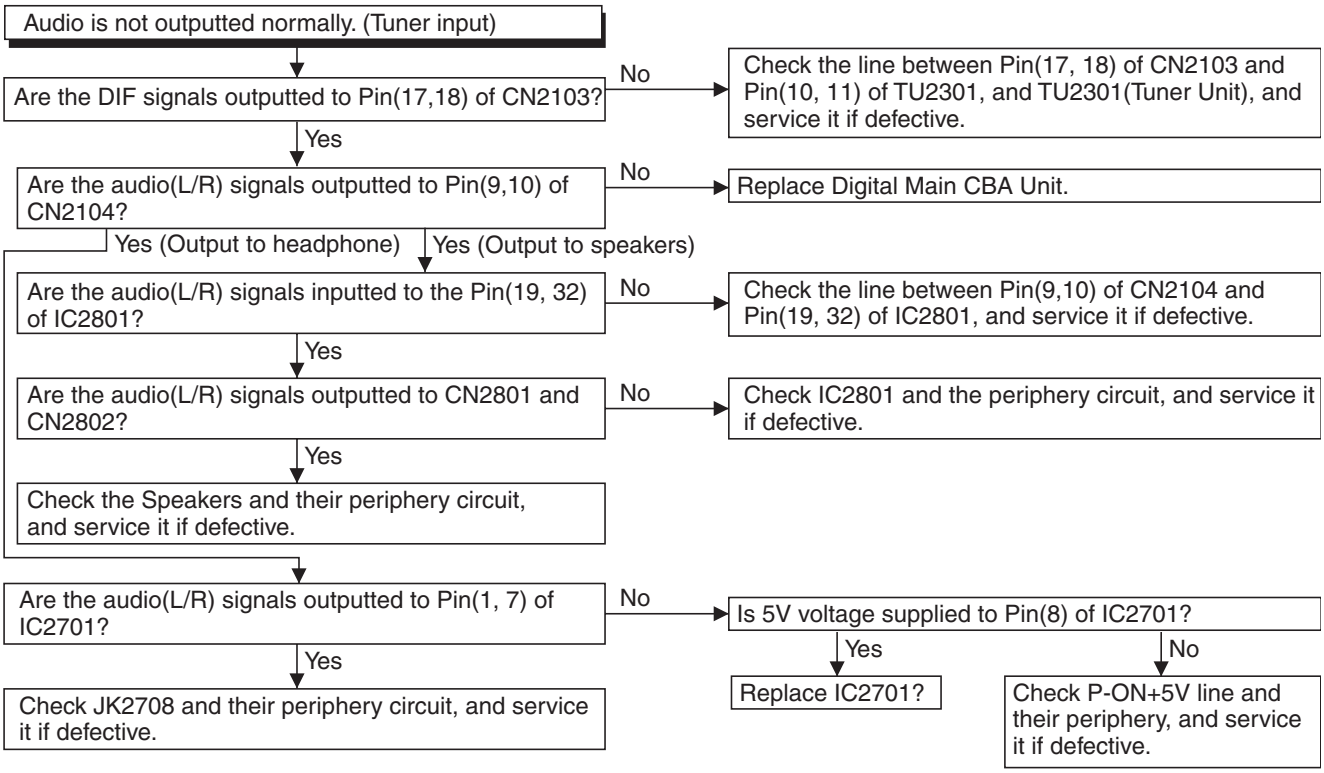
↓

Are the DIF signals outputted to Pin(17, 18) of CN2103? — No → Check the line between Pin(17, 18) of CN2103 and Pin(10, 11) of TU2301, and TU2301(Tuner Unit), and service it if defective.

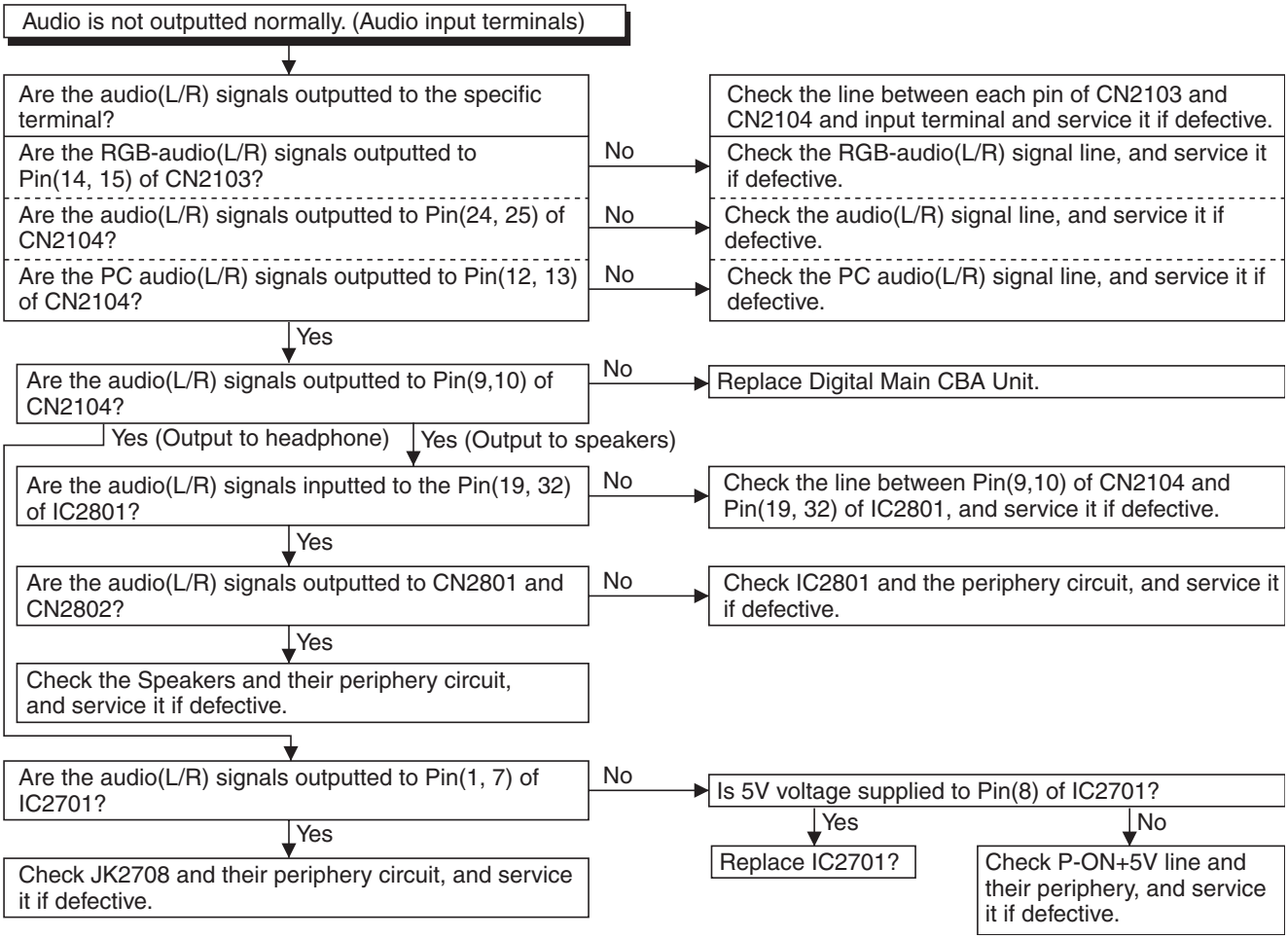
↓ Yes

Replace Digital Main CBA Unit or LCD Module Assembly.

FLOW CHART NO.9

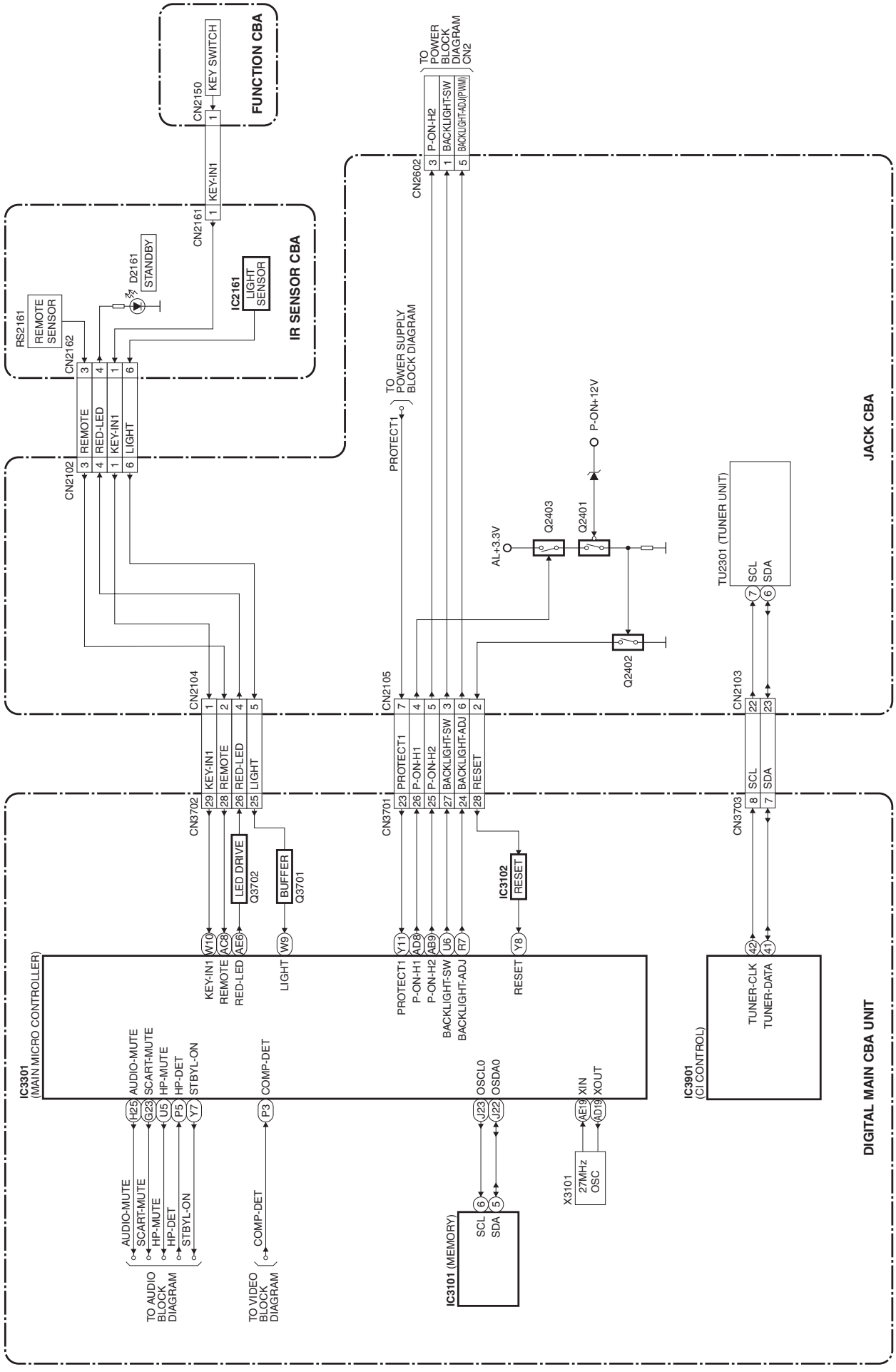

Audio is not outputted normally. (Tuner input)
Are the DIF signals outputted to Pin(17,18) of CN2103?
No
Check the line between Pin(17, 18) of CN2103 and Pin(10, 11) of TU2301, and TU2301(Tuner Unit), and service it if defective.
Yes
Are the audio(L/R) signals outputted to Pin(9,10) of CN2104?
No
Replace Digital Main CBA Unit.
Yes (Output to headphone)
Yes (Output to speakers)
Are the audio(L/R) signals inputted to the Pin(19, 32) of IC2801?
No
Check the line between Pin(9,10) of CN2104 and Pin(19, 32) of IC2801, and service it if defective.
Yes
Are the audio(L/R) signals outputted to CN2801 and CN2802?
No
Check IC2801 and the periphery circuit, and service it if defective.
Yes
Check the Speakers and their periphery circuit, and service it if defective.
Are the audio(L/R) signals outputted to Pin(1, 7) of IC2701?
No
Is 5V voltage supplied to Pin(8) of IC2701?
Yes
No
Replace IC2701?
Check P-ON+5V line and their periphery, and service it if defective.
Yes
Check JK2708 and their periphery circuit, and service it if defective.

FLOW CHART NO.10

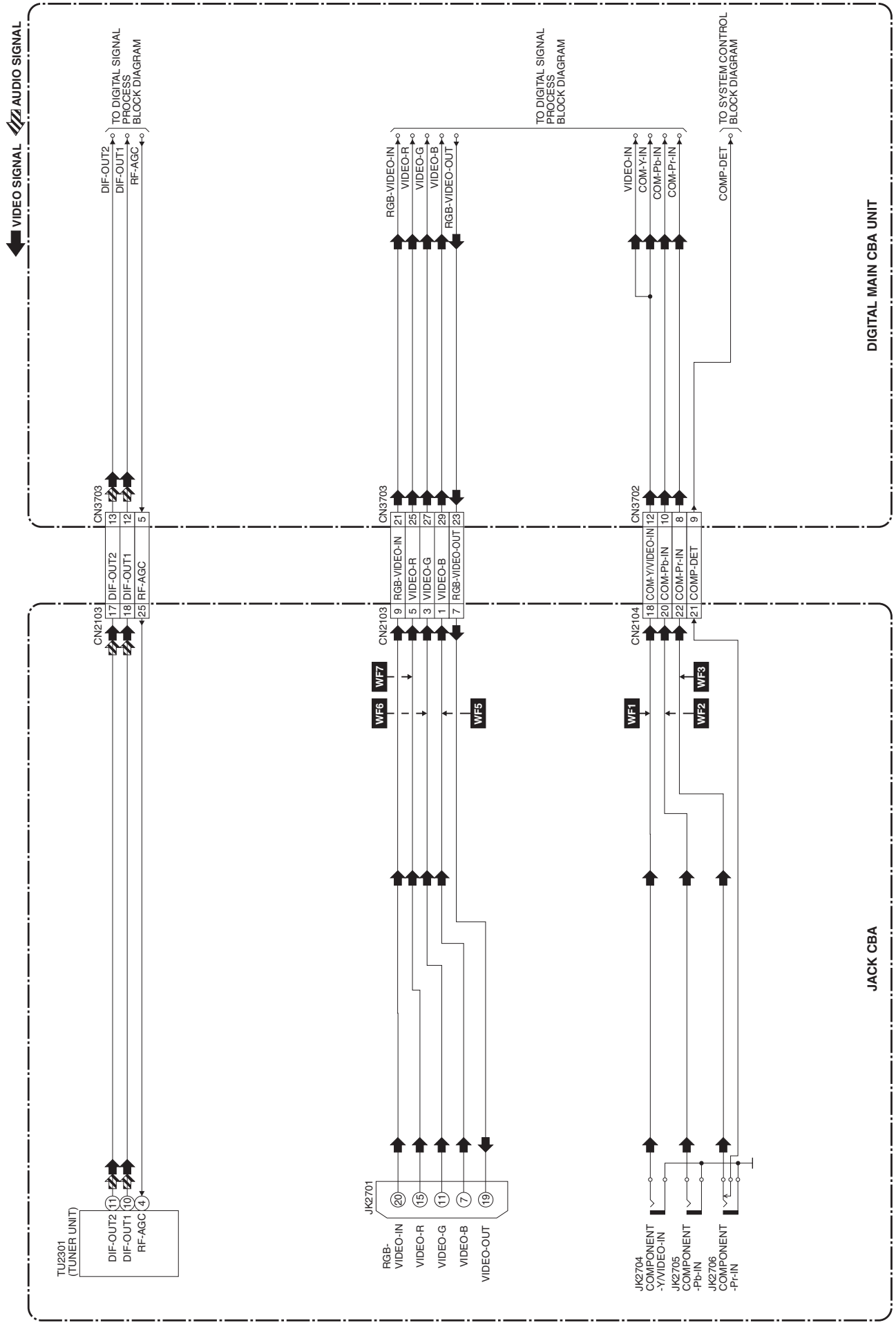

Audio is not outputted normally. (Audio input terminals)
Are the audio(L/R) signals outputted to the specific terminal?
Check the line between each pin of CN2103 and CN2104 and input terminal and service it if defective.
Are the RGB-audio(L/R) signals outputted to Pin(14, 15) of CN2103?
No
Check the RGB-audio(L/R) signal line, and service it if defective.
Are the audio(L/R) signals outputted to Pin(24, 25) of CN2104?
No
Check the audio(L/R) signal line, and service it if defective.
Are the PC audio(L/R) signals outputted to Pin(12, 13) of CN2104?
No
Check the PC audio(L/R) signal line, and service it if defective.
Yes
Are the audio(L/R) signals outputted to Pin(9,10) of CN2104?
No
Replace Digital Main CBA Unit.
Yes (Output to headphone)
Yes (Output to speakers)
Are the audio(L/R) signals inputted to the Pin(19, 32) of IC2801?
No
Check the line between Pin(9,10) of CN2104 and Pin(19, 32) of IC2801, and service it if defective.
Yes
Are the audio(L/R) signals outputted to CN2801 and CN2802?
No
Check IC2801 and the periphery circuit, and service it if defective.
Yes
Check the Speakers and their periphery circuit, and service it if defective.
Are the audio(L/R) signals outputted to Pin(1, 7) of IC2701?
No
Is 5V voltage supplied to Pin(8) of IC2701?
Yes
No
Replace IC2701?
Check P-ON+5V line and their periphery, and service it if defective.
Yes
Check JK2708 and their periphery circuit, and service it if defective.

BLOCK DIAGRAMS

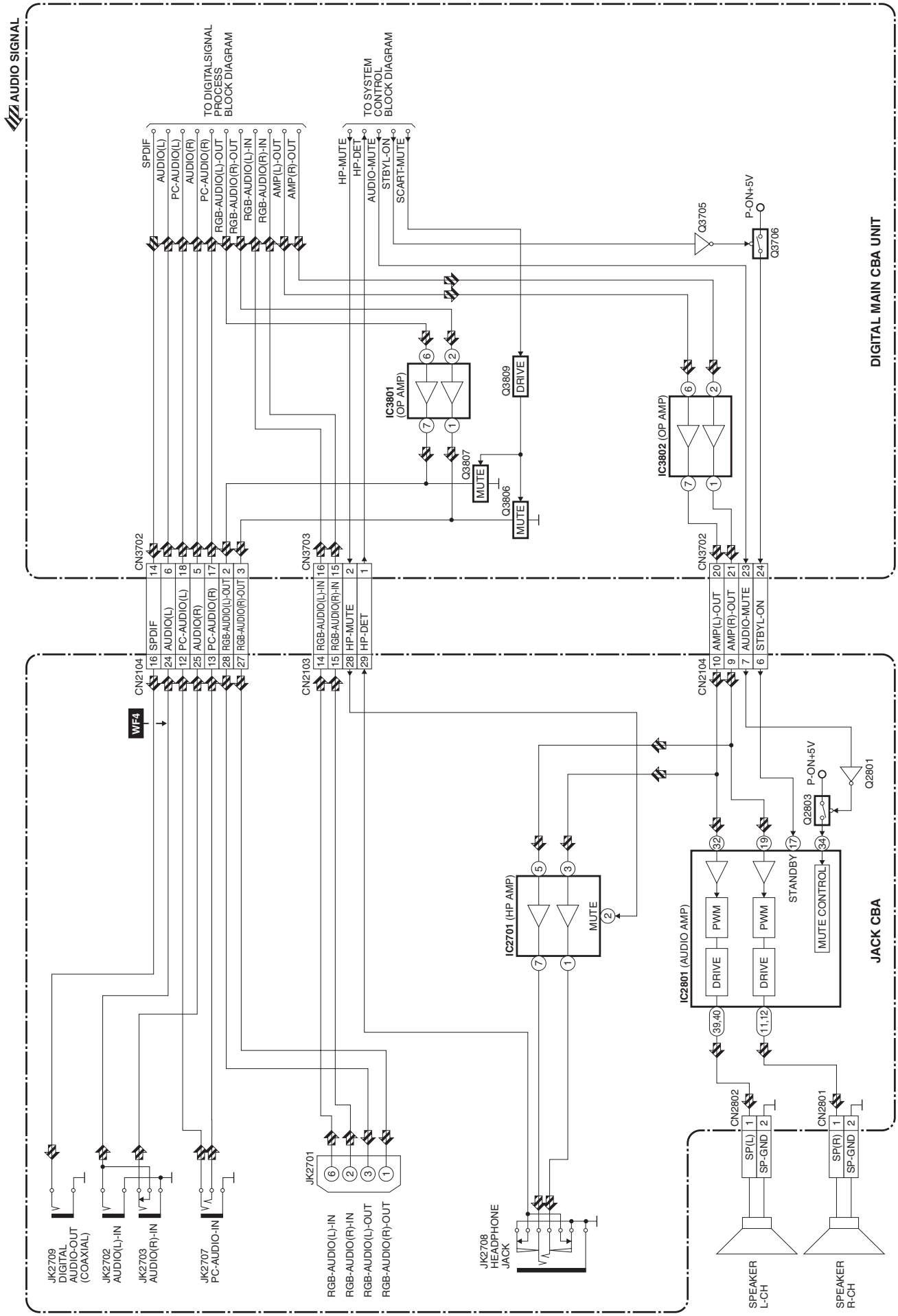
System Control Block Diagram



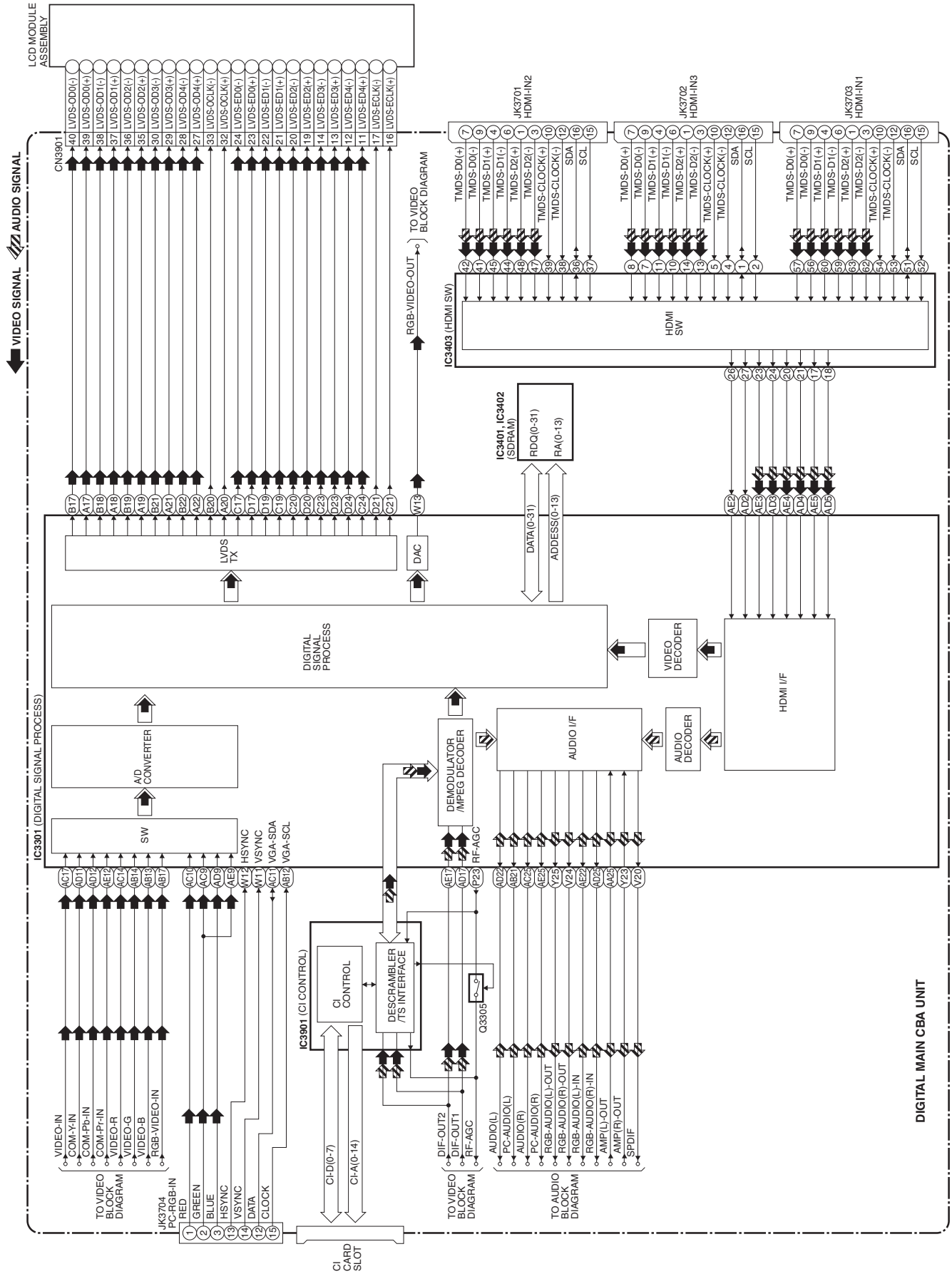
Video Block Diagram



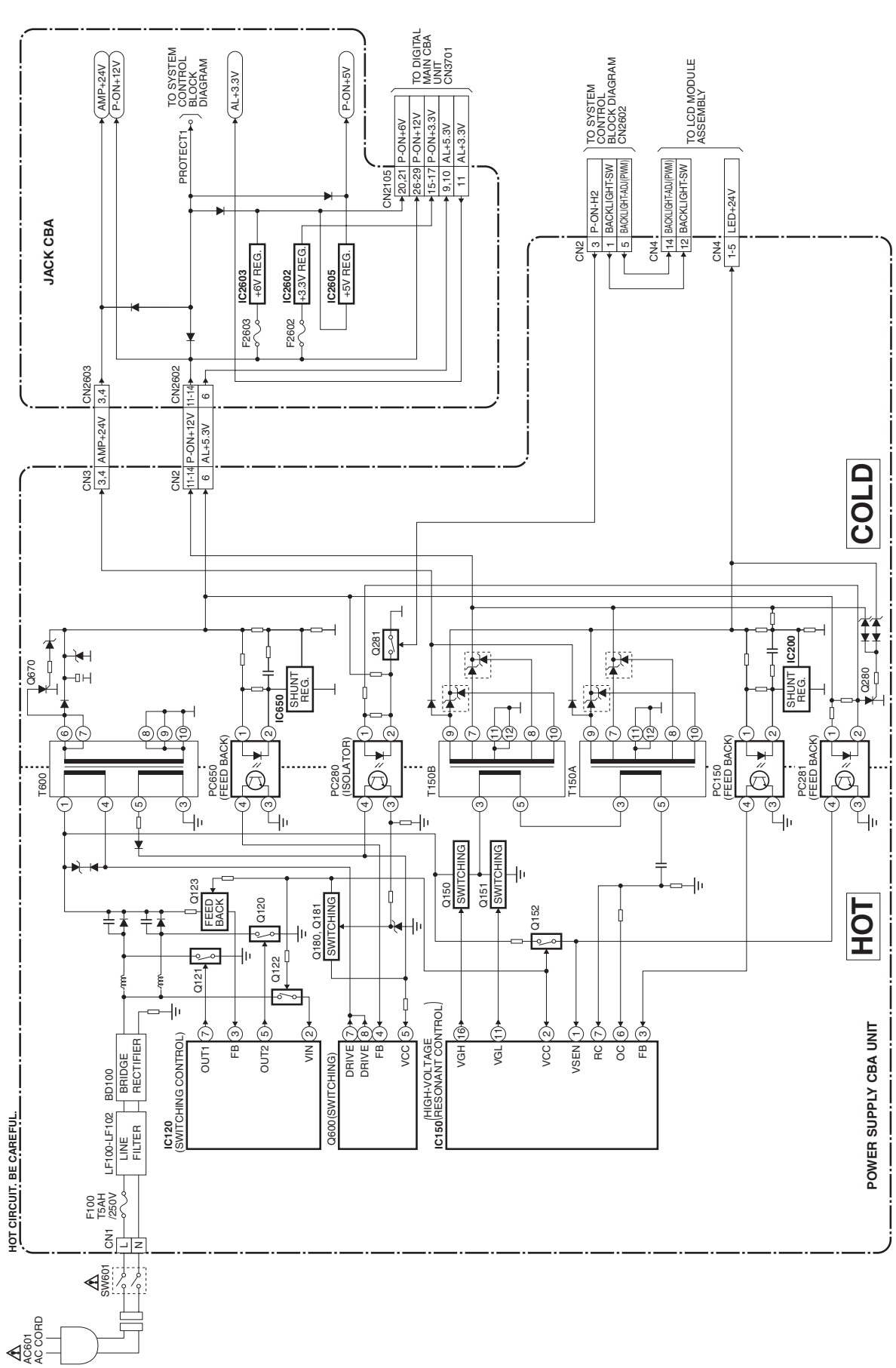
Audio Block Diagram



Digital Signal Process Block Diagram



Power Supply Block Diagram



SCHEMATIC DIAGRAMS / CBA AND TEST POINTS

Standard Notes

WARNING

Many electrical and mechanical parts in this chassis have special characteristics. These characteristics often pass unnoticed and the protection afforded by them cannot necessarily be obtained by using replacement components rated for higher voltage, wattage, etc. Replacement parts that have these special safety characteristics are identified in this manual and its supplements; electrical components having such features are identified by the mark "⚠" in the schematic diagram and the parts list. Before replacing any of these components, read the parts list in this manual carefully. The use of substitute replacement parts that do not have the same safety characteristics as specified in the parts list may create shock, fire, or other hazards.

Notes:

1. Do not use the part number shown on these drawings for ordering. The correct part number is shown in the parts list, and may be slightly different or amended since these drawings were prepared.
2. All resistance values are indicated in ohms ($K = 10^3$, $M = 10^6$).
3. Resistor wattages are 1/4W or 1/6W unless otherwise specified.
4. All capacitance values are indicated in F ($P = 10^{-6}$ F).
5. All voltages are DC voltages unless otherwise specified.
6. Electrical parts such as capacitors, connectors, diodes, IC's, transistors, resistors, switches, and fuses are identified by four digits. The first two digits are not shown for each component. In each block of the diagram, there is a note such as shown below to indicate these abbreviated two digits.

LIST OF CAUTION, NOTES, AND SYMBOLS USED IN THE SCHEMATIC DIAGRAMS ON THE FOLLOWING PAGES:

1. CAUTION:

FOR CONTINUED PROTECTION AGAINST FIRE HAZARD, REPLACE ONLY WITH THE SAME TYPE FUSE.

2. CAUTION:

Fixed Voltage (or Auto voltage selectable) power supply circuit is used in this unit.

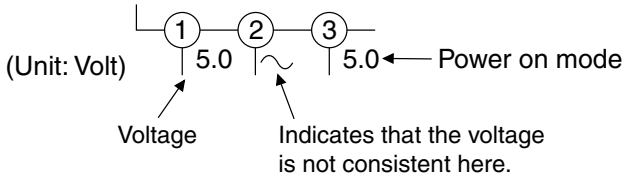
If Main Fuse (F100) is blown, first check to see that all components in the power supply circuit are not defective before you connect the AC plug to the AC power supply. Otherwise it may cause some components in the power supply circuit to fail.

3. Note:

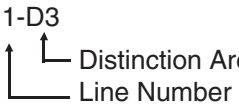
1. Do not use the part number shown on the drawings for ordering. The correct part number is shown in the parts list, and may be slightly different or amended since the drawings were prepared.
2. To maintain original function and reliability of repaired units, use only original replacement parts which are listed with their part numbers in the parts list section of the service manual.

4. Voltage indications on the schematics are as shown below:

Plug the TV power cord into a standard AC outlet.:

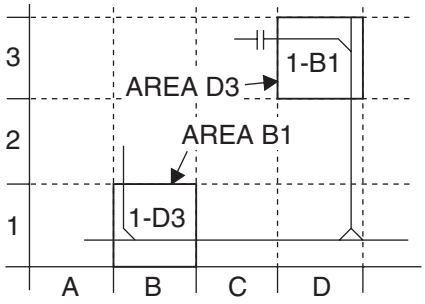


5. How to read converged lines



Examples:

1. "1-D3" means that line number "1" goes to the line number "1" of the area "D3".
2. "1-B1" means that line number "1" goes to the line number "1" of the area "B1".



6. Test Point Information

: Indicates a test point with a jumper wire across a hole in the PCB.

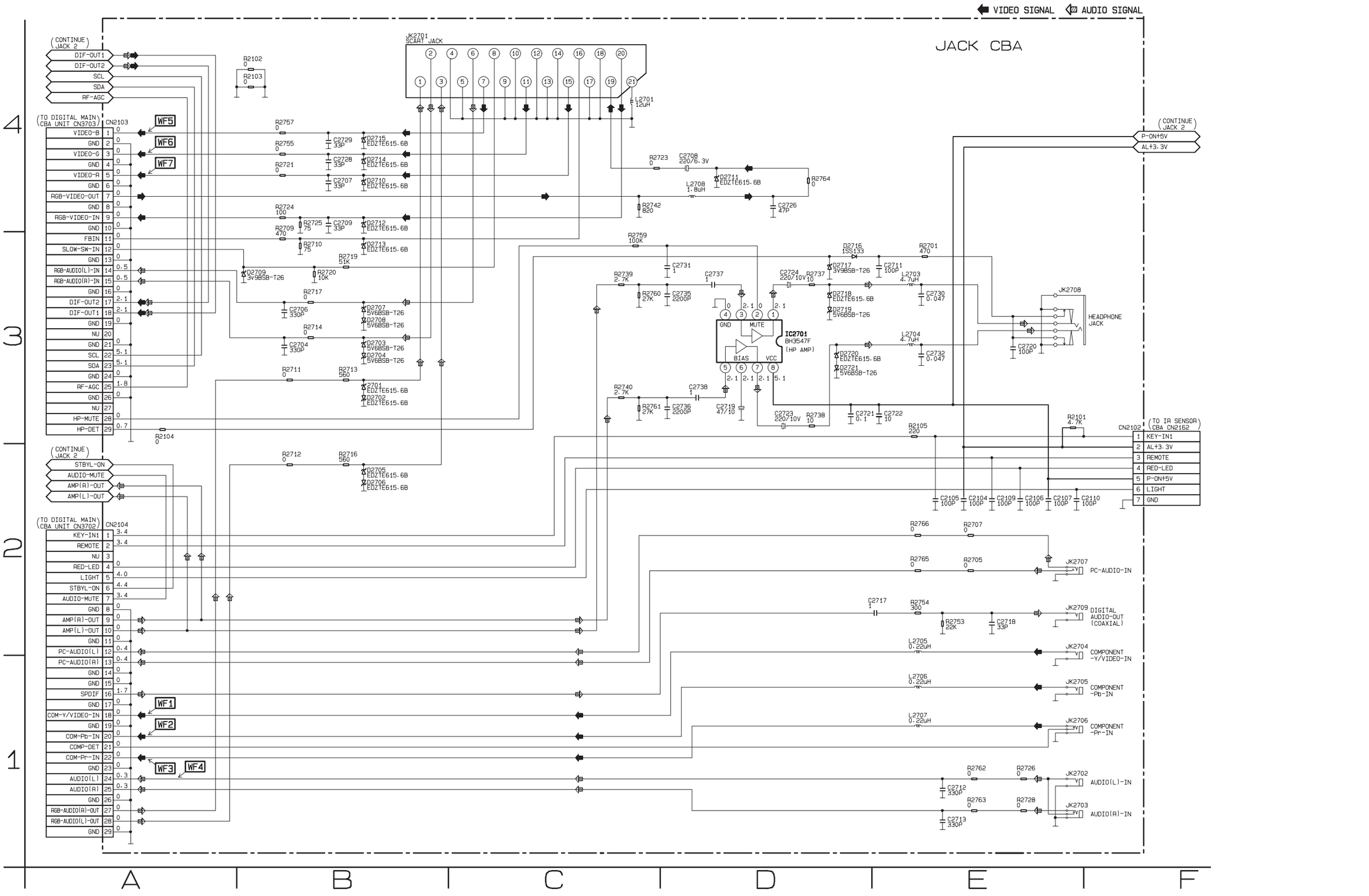
: Used to indicate a test point with a component lead on foil side.

: Used to indicate a test point with no test pin.

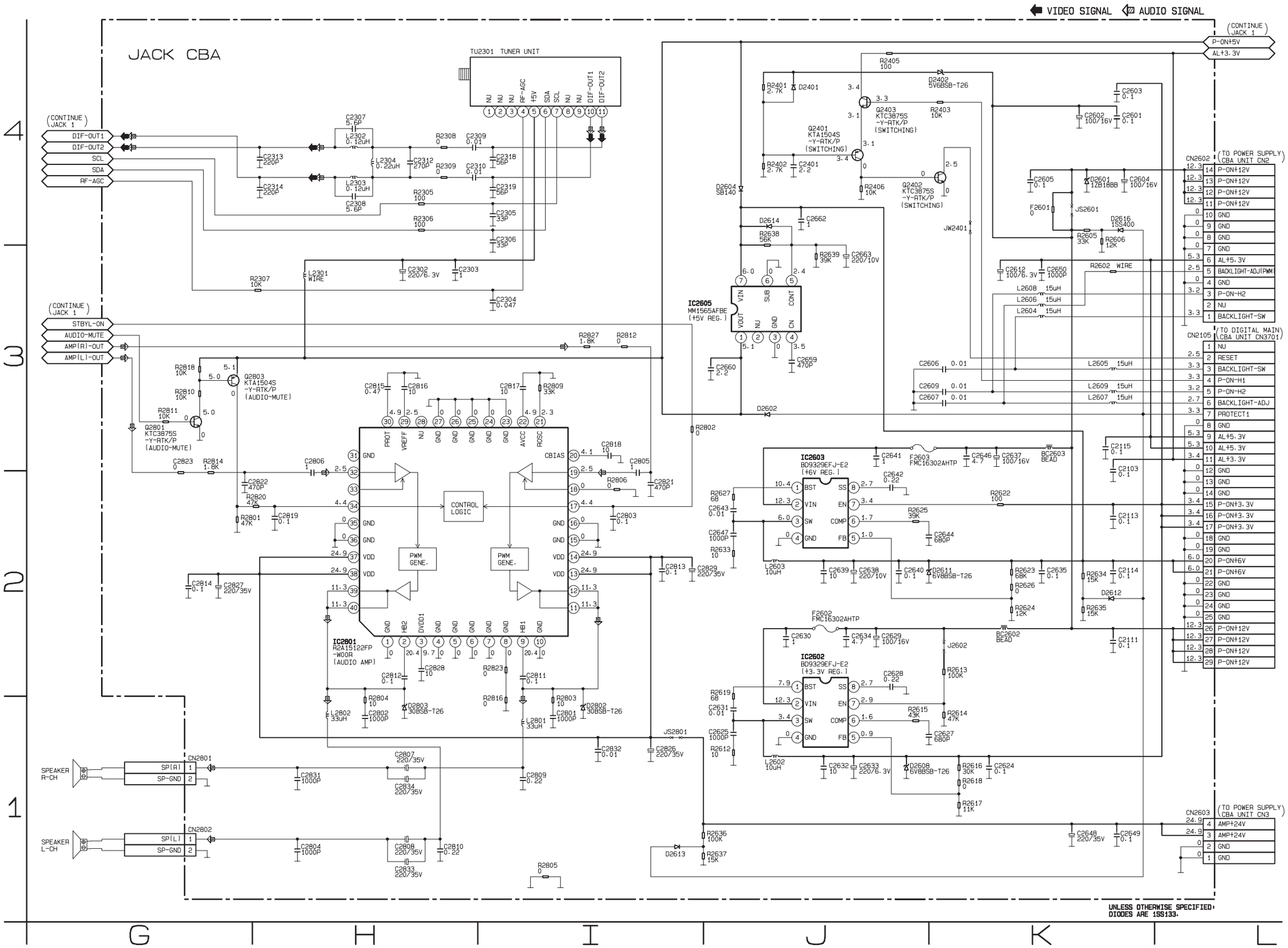
: Used to indicate a test point with a test pin.

The reference number of parts on Schematic Diagrams/CBA, except for the Power Supply CBA Unit, can be retrieved by application search function.

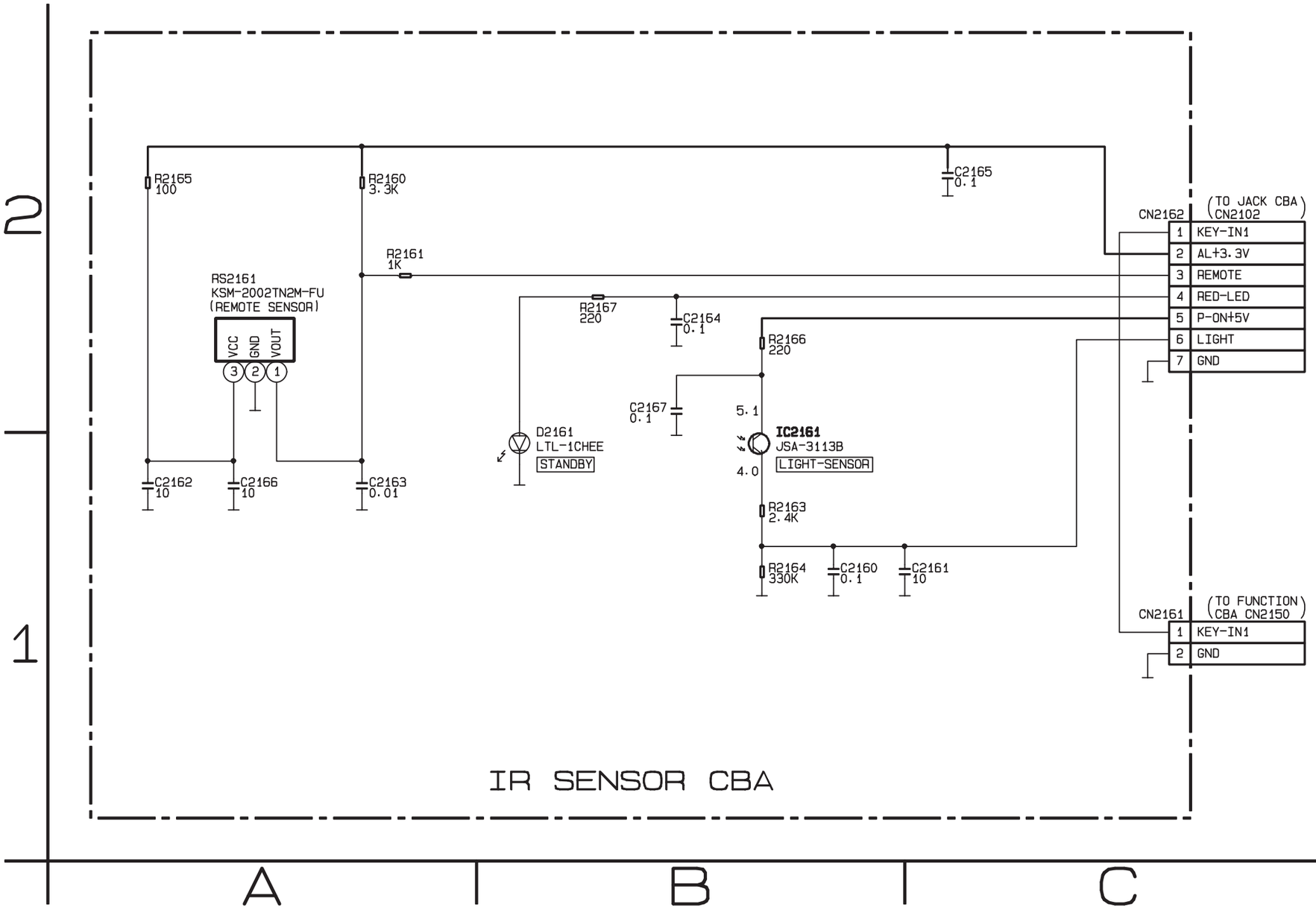
Jack 1 Schematic Diagram



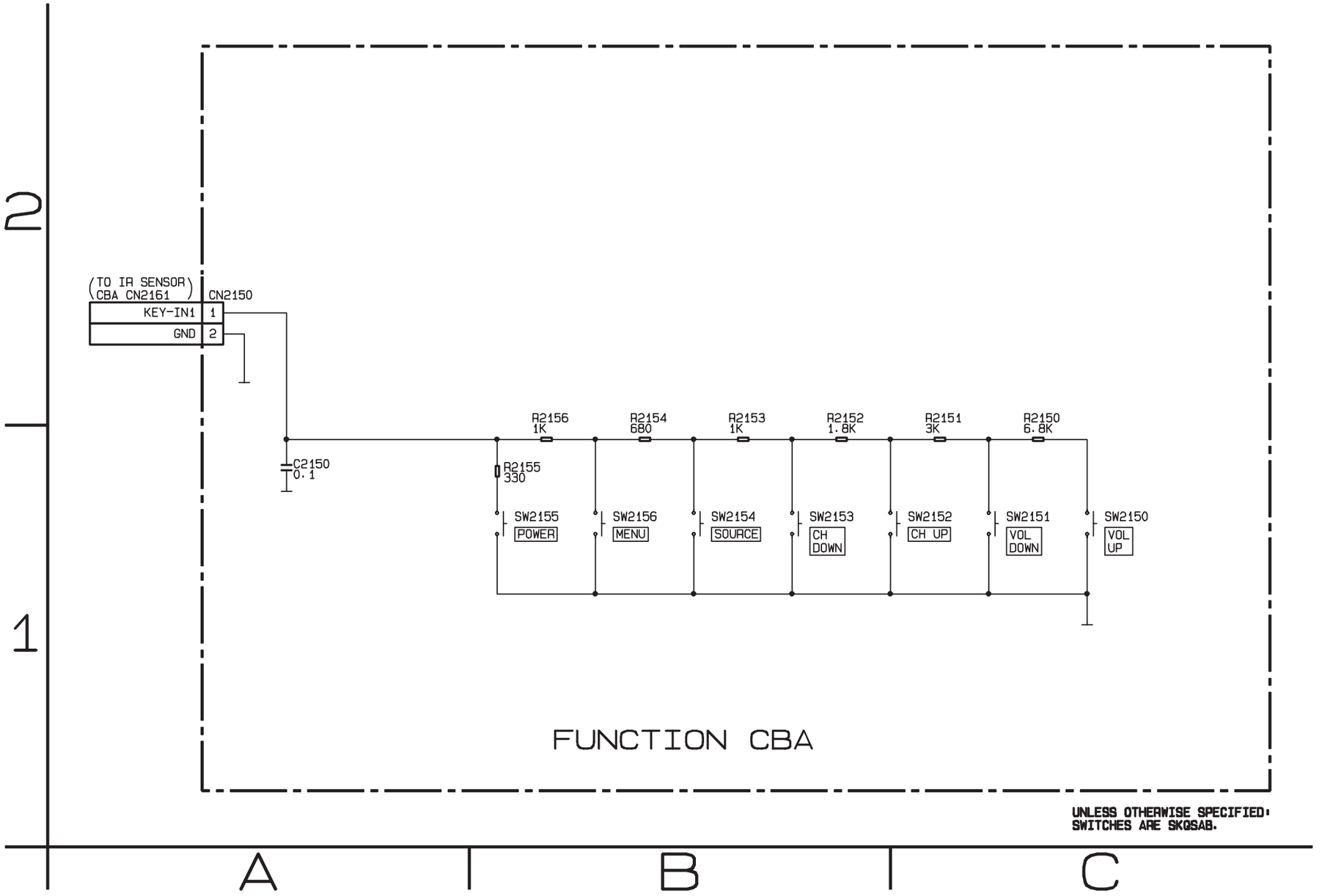
Jack 2 Schematic Diagram



IR Sensor Schematic Diagram



Function Schematic Diagram

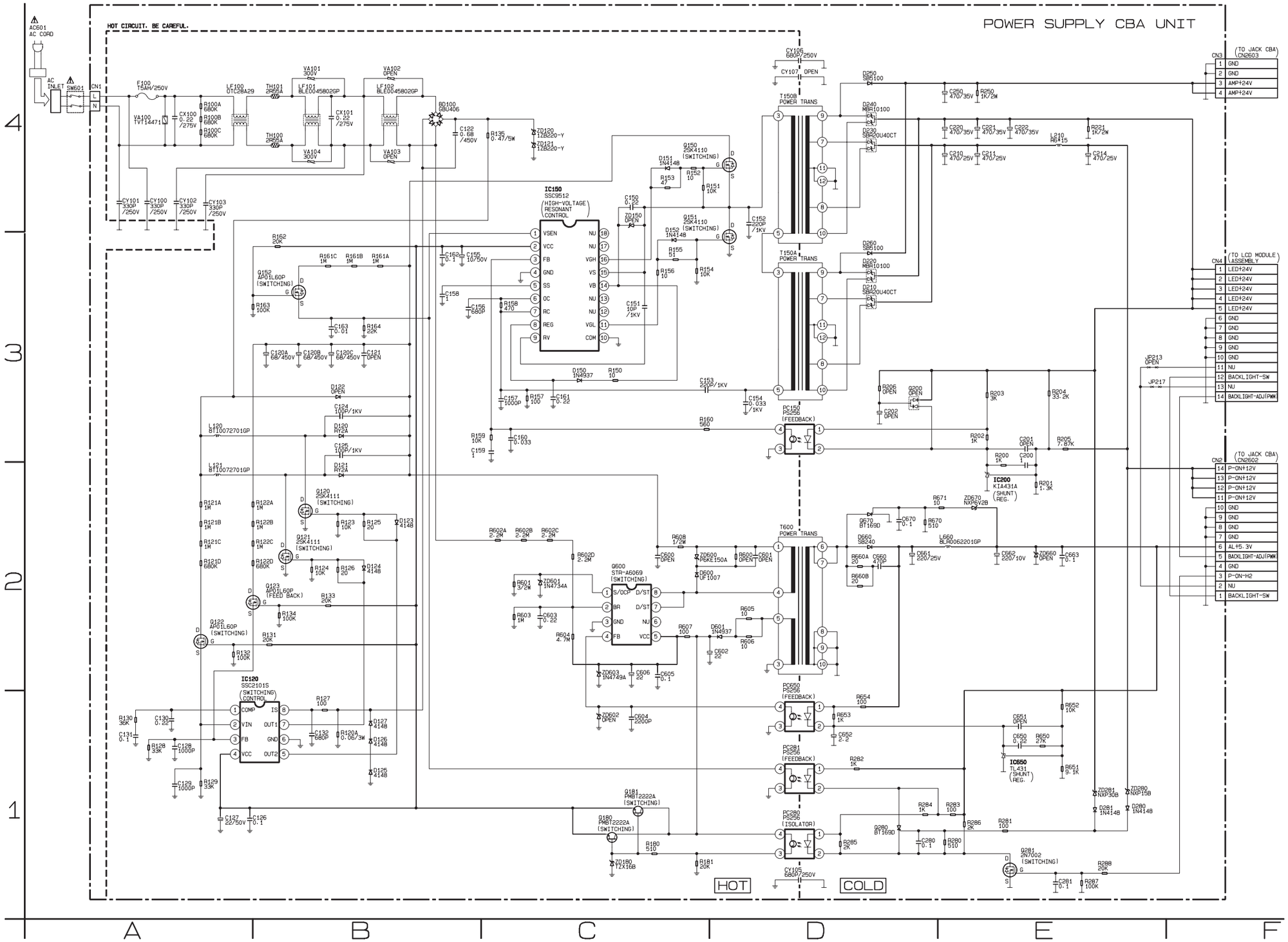


Power Supply Schematic Diagram

CAUTION !
Fixed voltage (or Auto voltage selectable) power supply circuit is used in this unit. If Main Fuse (F100) is blown , check to see that all components in the power supply circuit are not defective before you connect the AC plug to the AC power supply. Otherwise it may cause some components in the power supply circuit to fail.

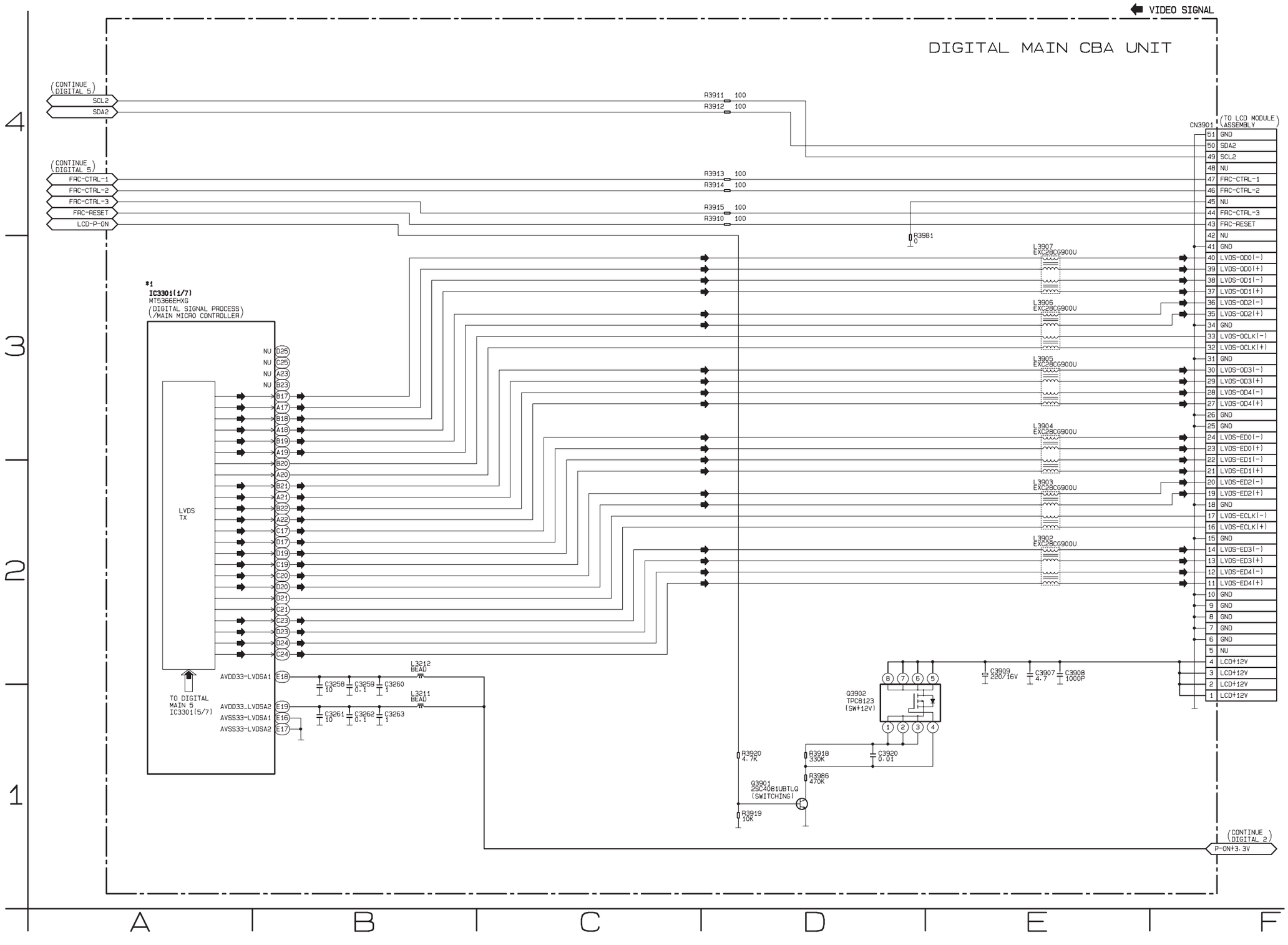
NOTE:
The voltage for parts in hot circuit is measured using hot GND as a common terminal.

CAUTION !
For continued protection against fire hazard, replace only with the same type fuse.



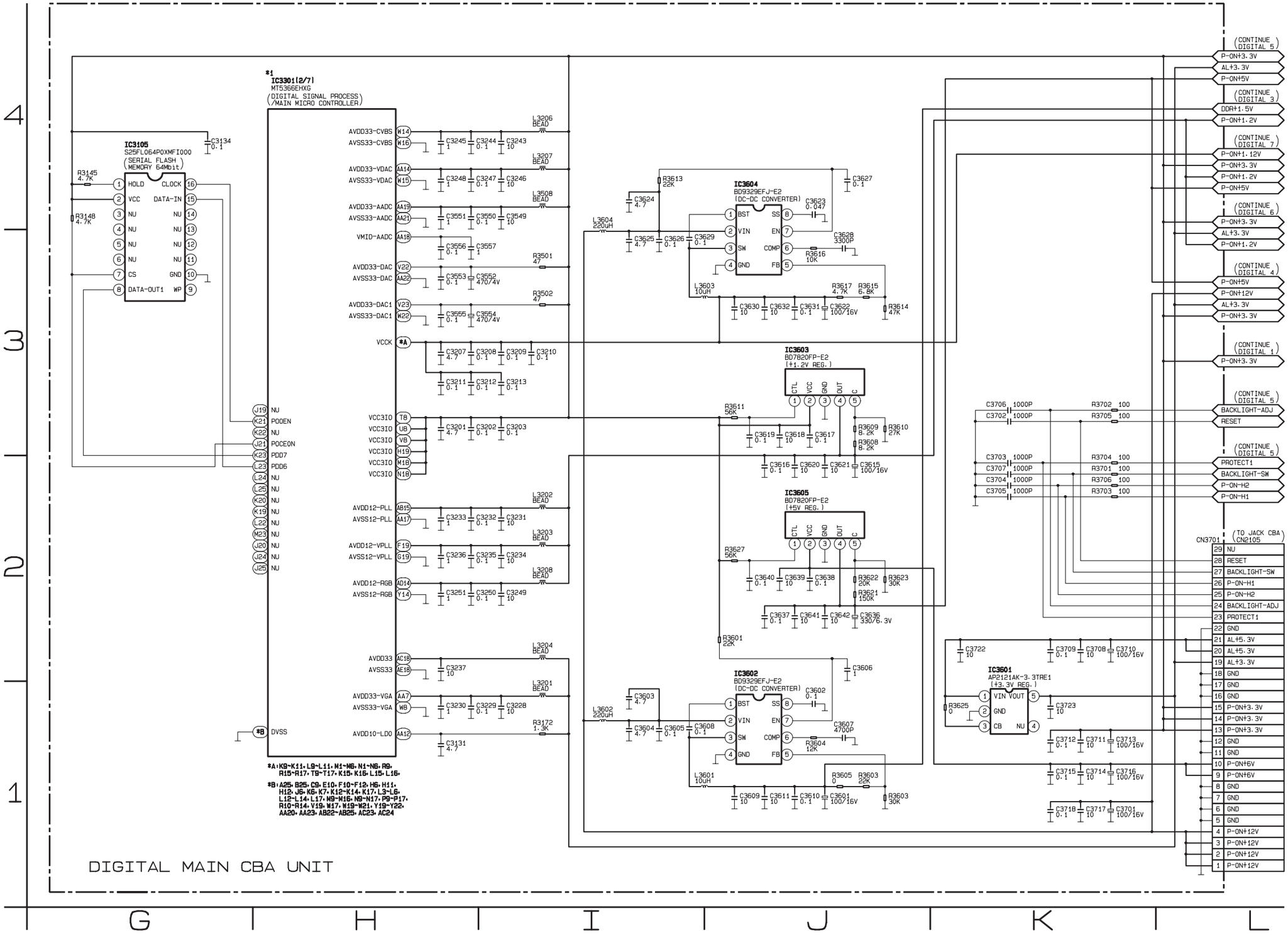
Digital Main 1 Schematic Diagram

∗1 NOTE:
The order of pins shown in this diagram is different from that of actual IC3301.
IC3301 is divided into seven and shown as IC3301 (1/7) ~ IC3301 (7/7) in this Digital Main Schematic Diagram Section.



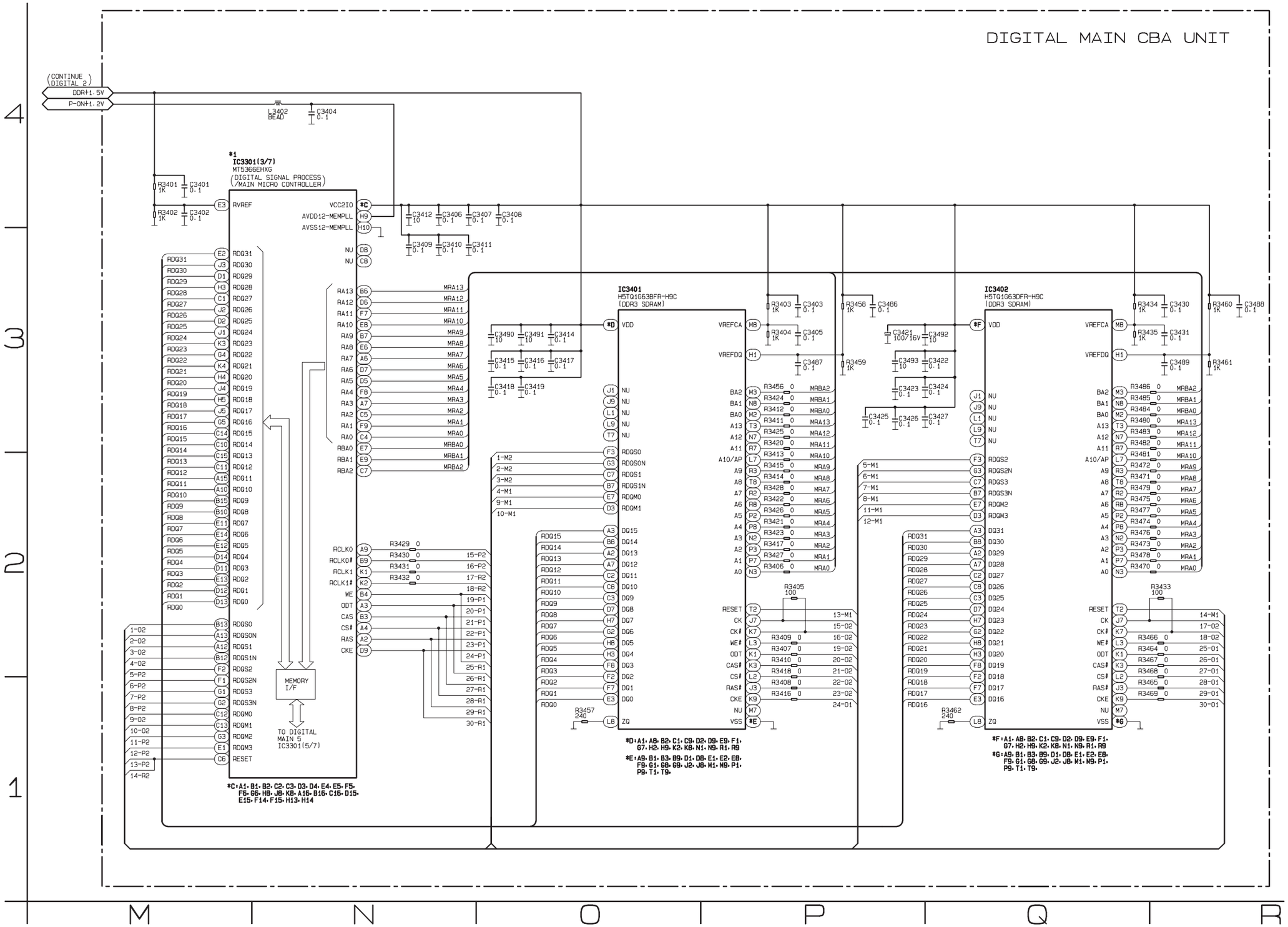
Digital Main 2 Schematic Diagram

∗1 NOTE:
The order of pins shown in this diagram is different from that of actual IC3301.
IC3301 is divided into seven and shown as IC3301 (1/7) ~ IC3301 (7/7) in this Digital Main Schematic Diagram Section.



Digital Main 3 Schematic Diagram

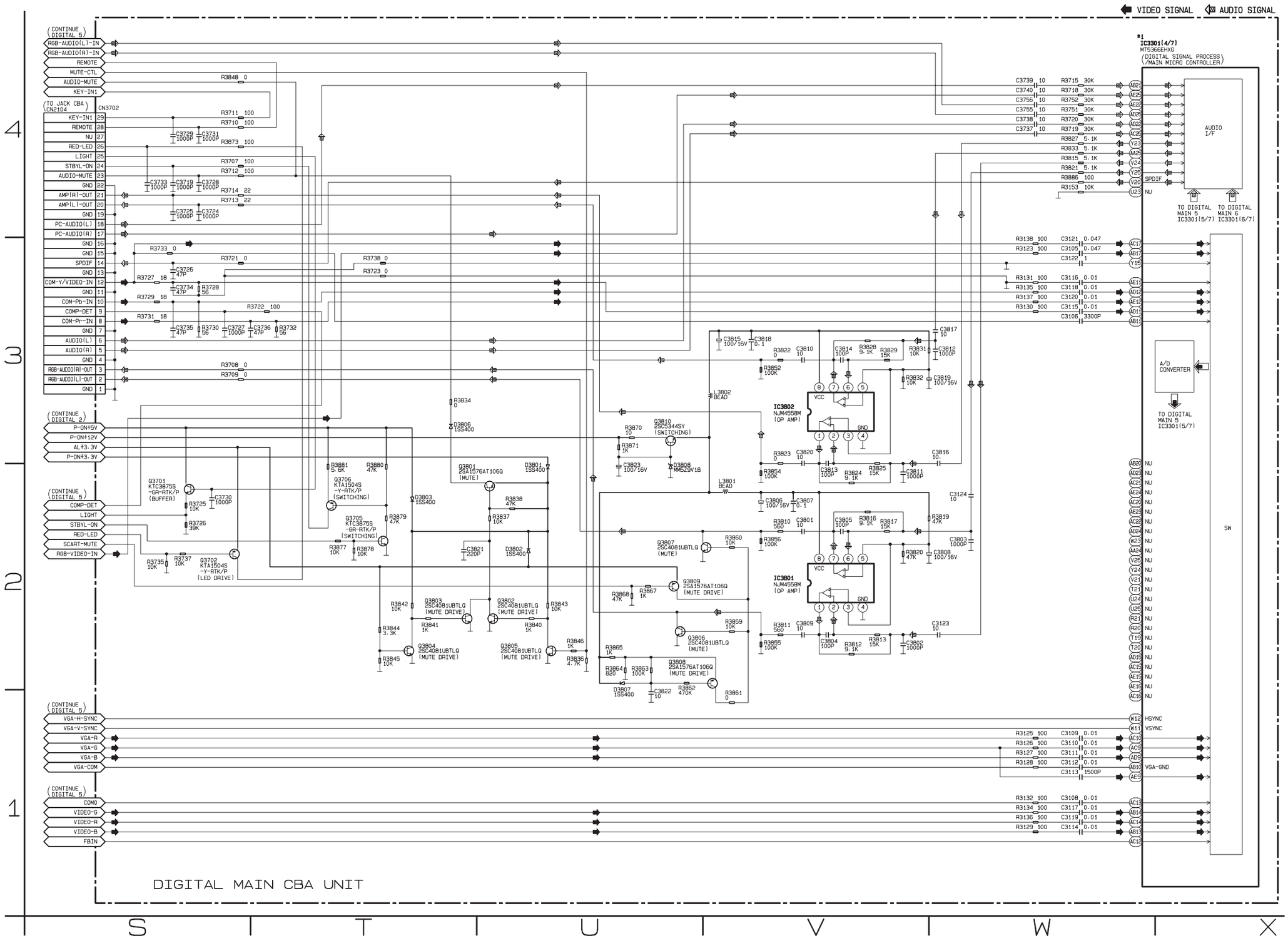
∗1 NOTE:
The order of pins shown in this diagram is different from that of actual IC3301.
IC3301 is divided into seven and shown as IC3301 (1/7) ~ IC3301 (7/7) in this Digital Main Schematic Diagram Section.



A13P0SCD3

Digital Main 4 Schematic Diagram

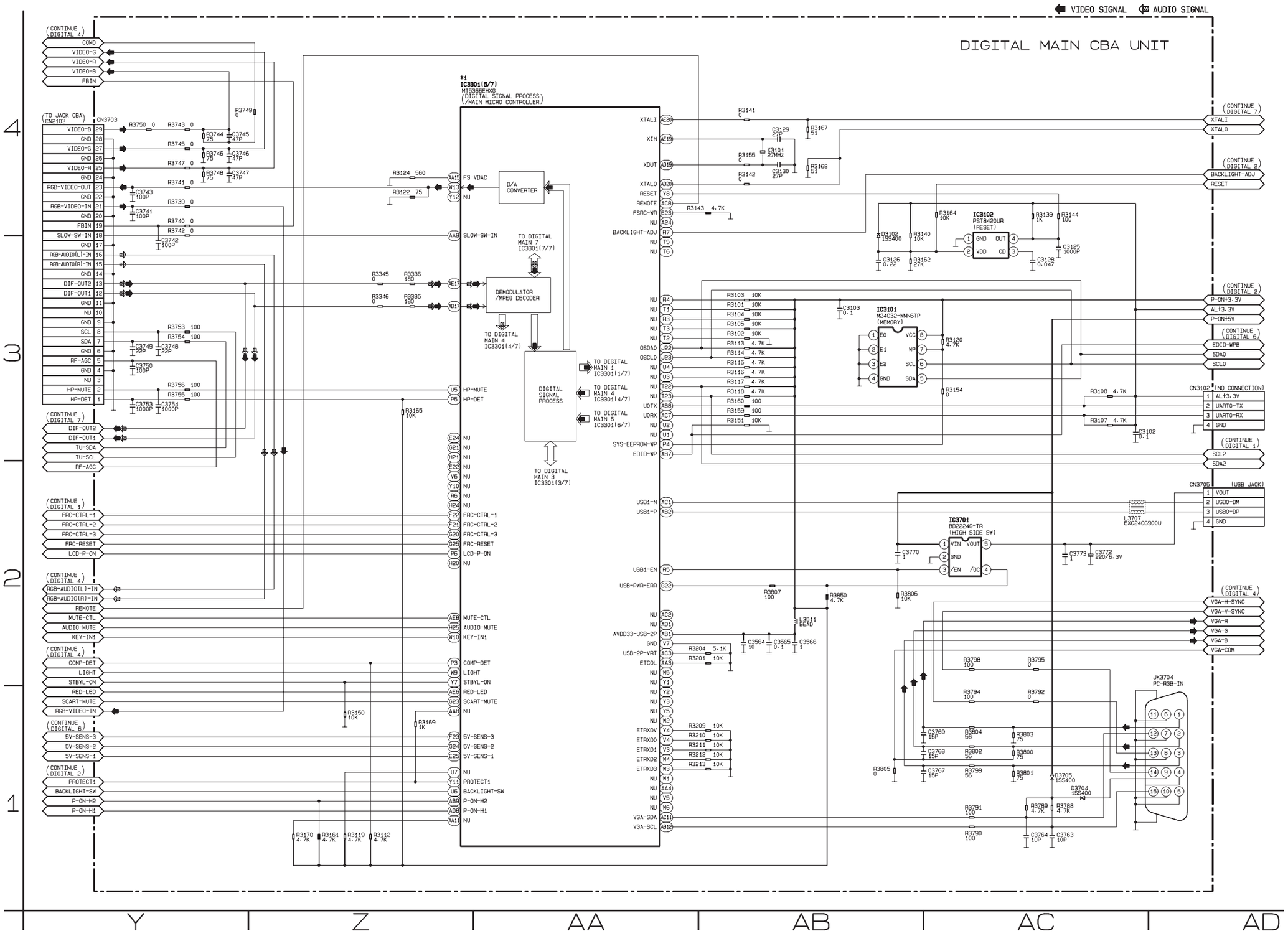
∗1 **NOTE:**
The order of pins shown in this diagram is different from that of actual IC3301.
IC3301 is divided into seven and shown as IC3301 (1/7) ~ IC3301 (7/7) in this Digital Main Schematic Diagram Section.



A13P0SCD4

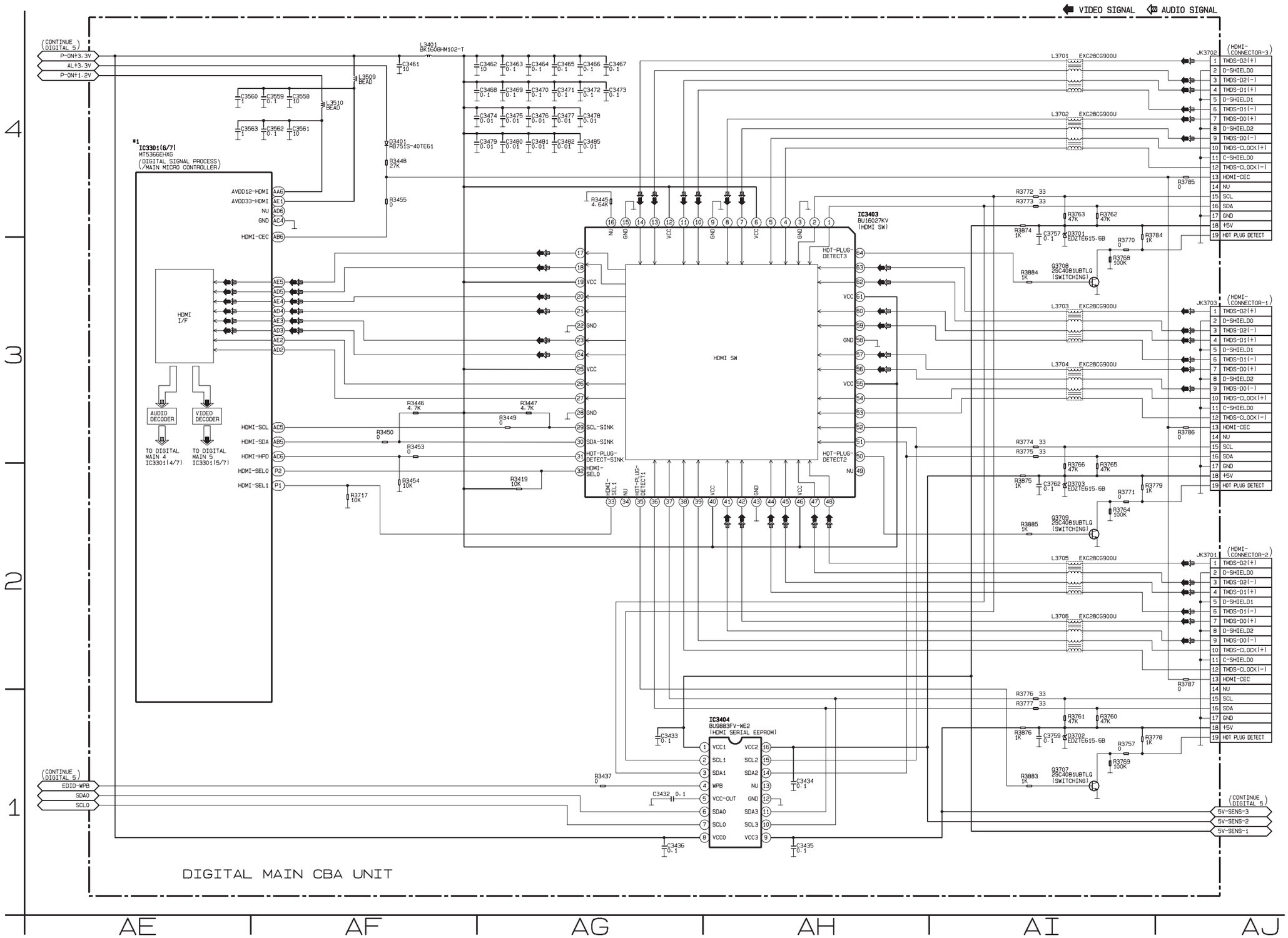
Digital Main 5 Schematic Diagram

∗1 **NOTE:**
The order of pins shown in this diagram is different from that of actual IC3301.
IC3301 is divided into seven and shown as IC3301 (1/7) ~ IC3301 (7/7) in this Digital Main Schematic Diagram Section.



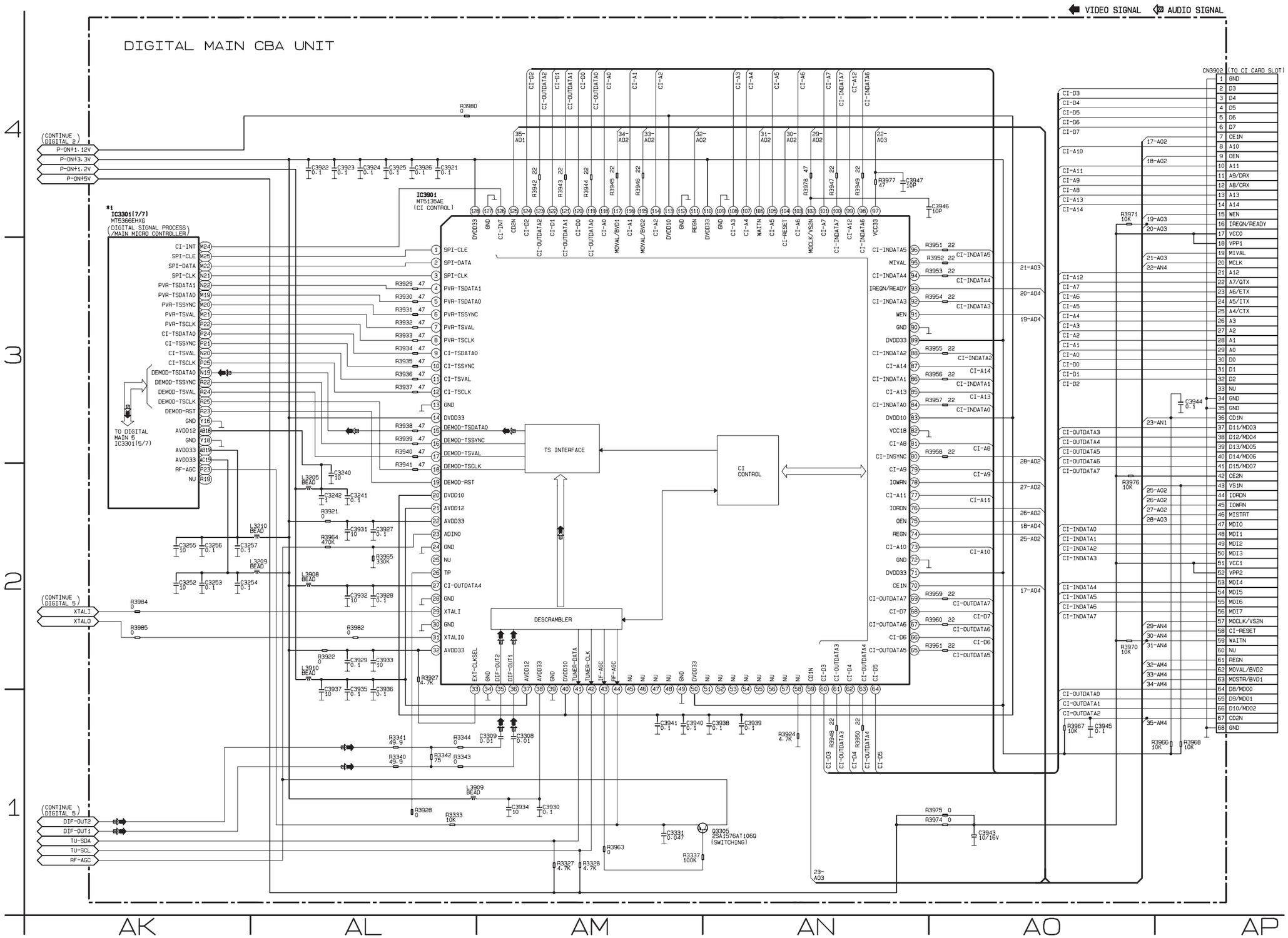
Digital Main 6 Schematic Diagram

∗1 **NOTE:**
The order of pins shown in this diagram is different from that of actual IC3301.
IC3301 is divided into seven and shown as IC3301 (1/7) ~ IC3301 (7/7) in this Digital Main Schematic Diagram Section.

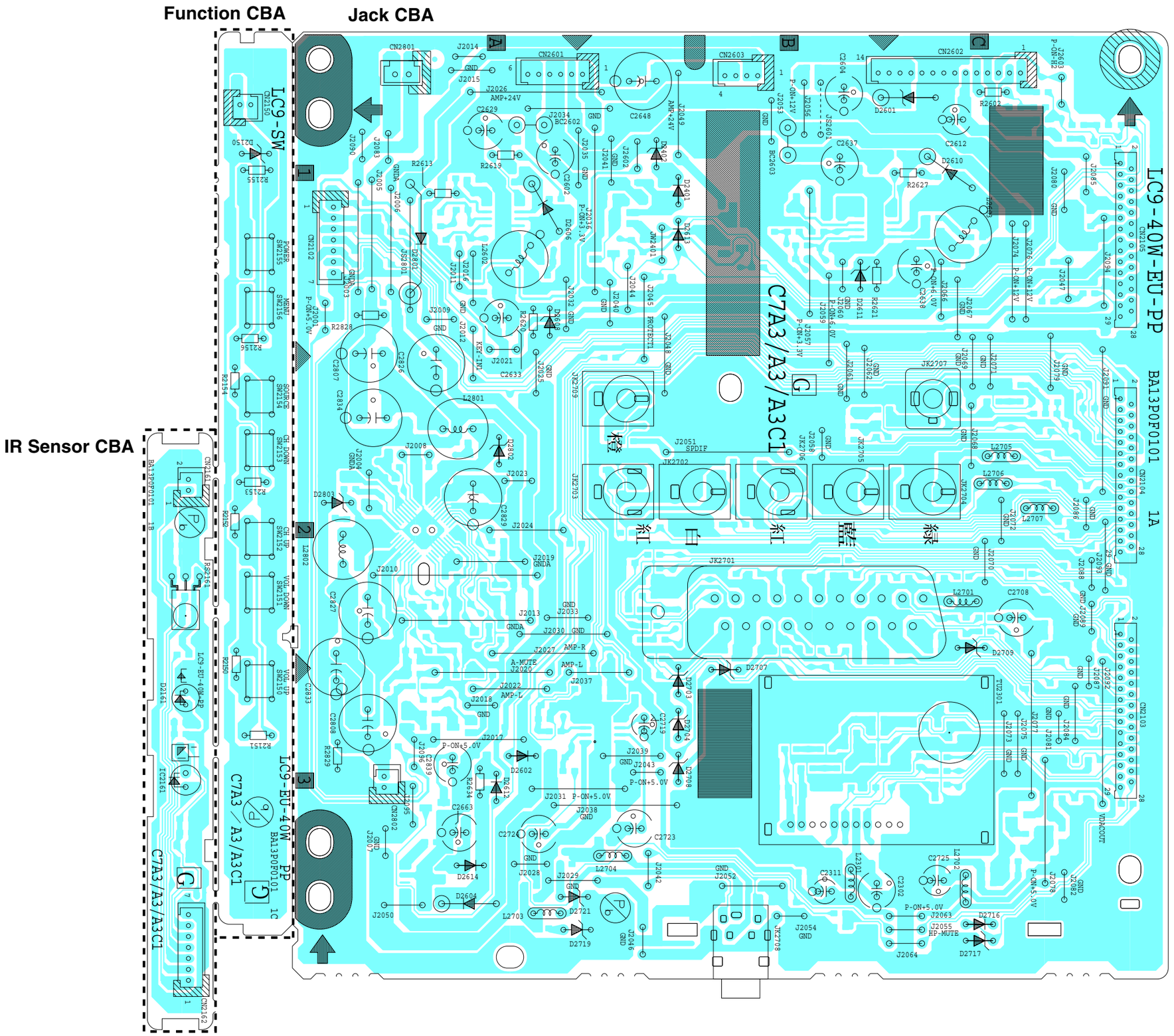


Digital Main 7 Schematic Diagram

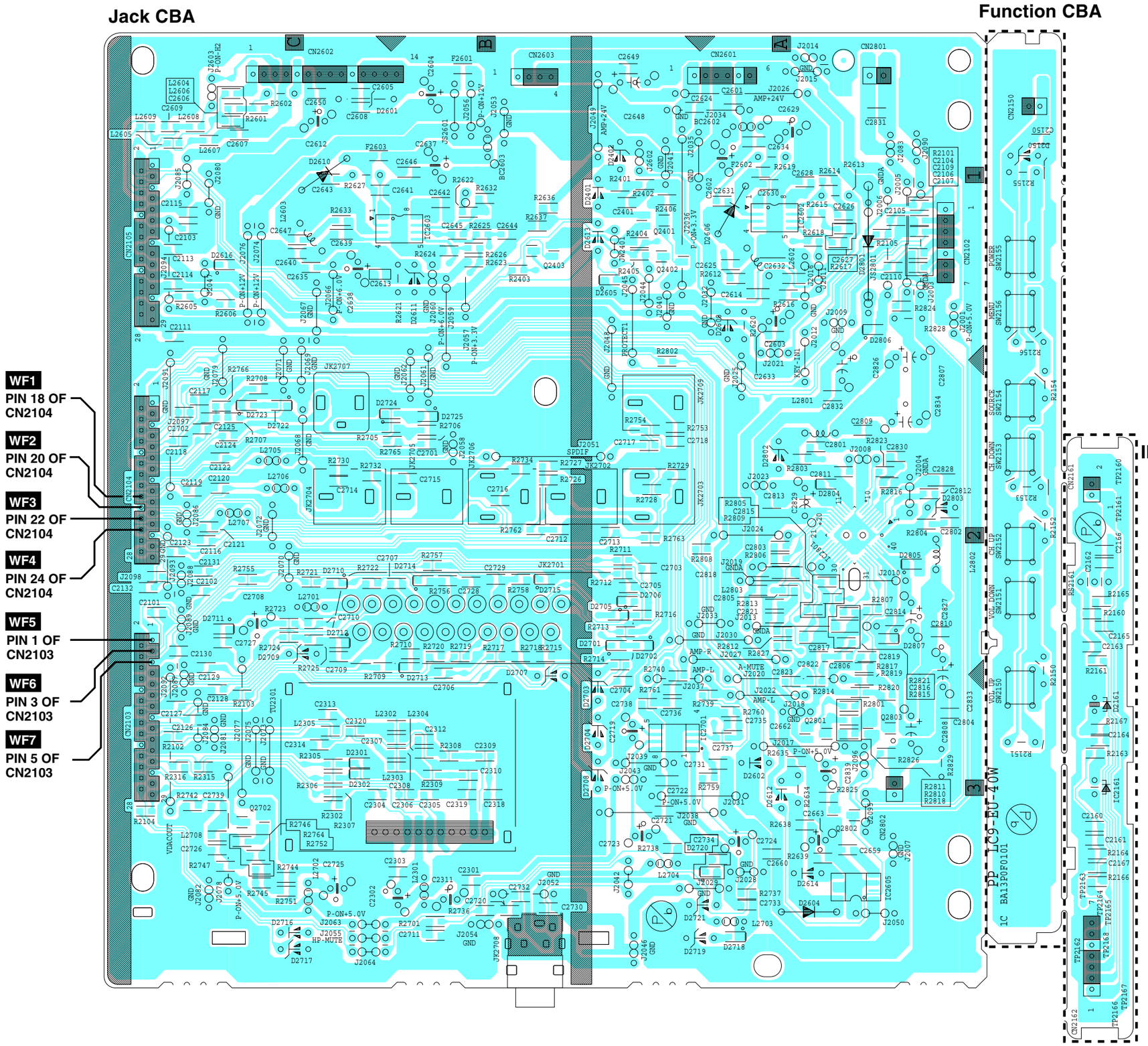
∗1 **NOTE:**
The order of pins shown in this diagram is different from that of actual IC3301.
IC3301 is divided into seven and shown as IC3301 (1/7) ~ IC3301 (7/7) in this Digital Main Schematic Diagram Section.



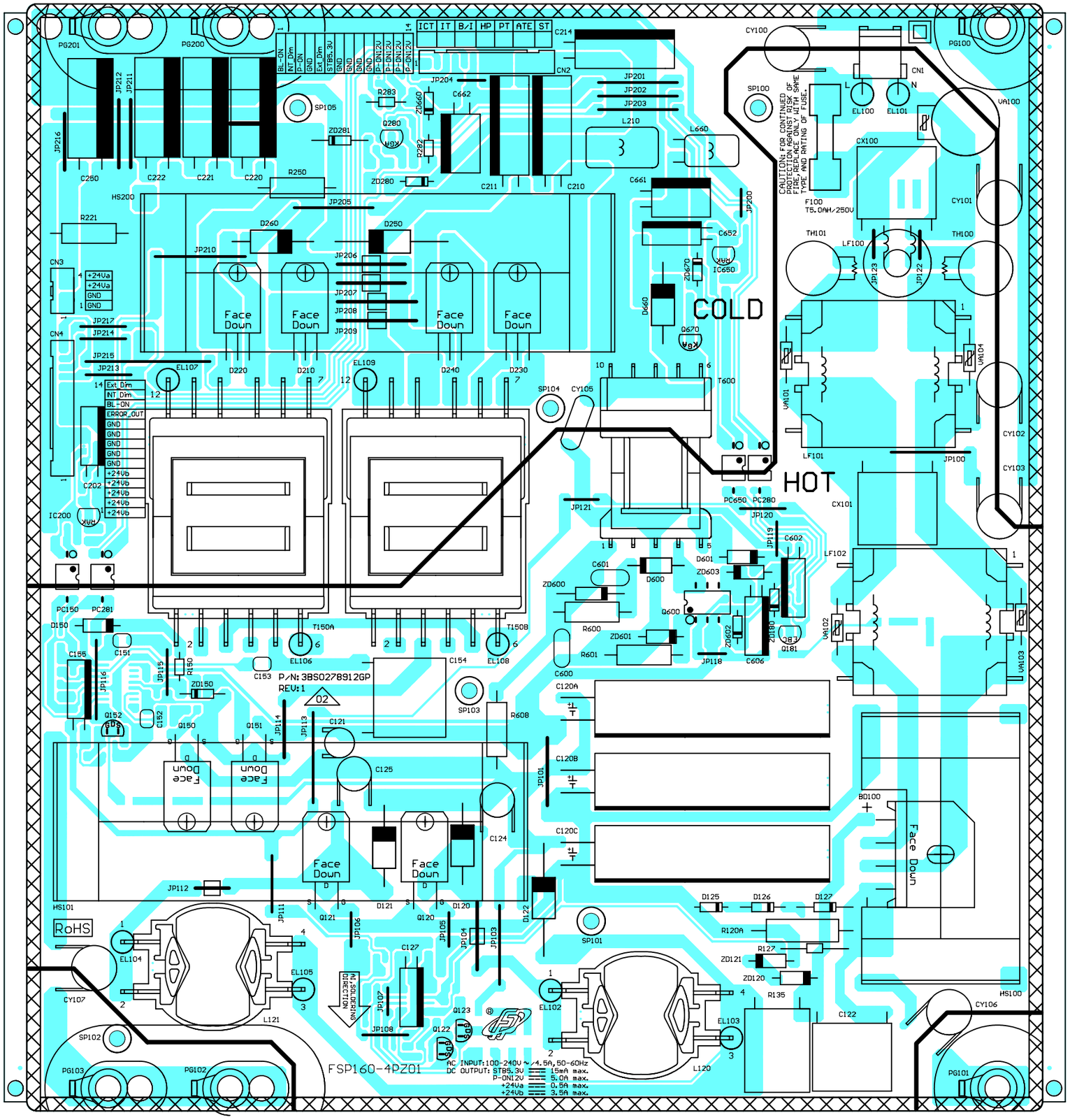
Jack CBA, IR Sensor CBA & Function CBA Top View



Jack CBA, IR Sensor CBA & Function CBA Bottom View



Power Supply CBA Top View



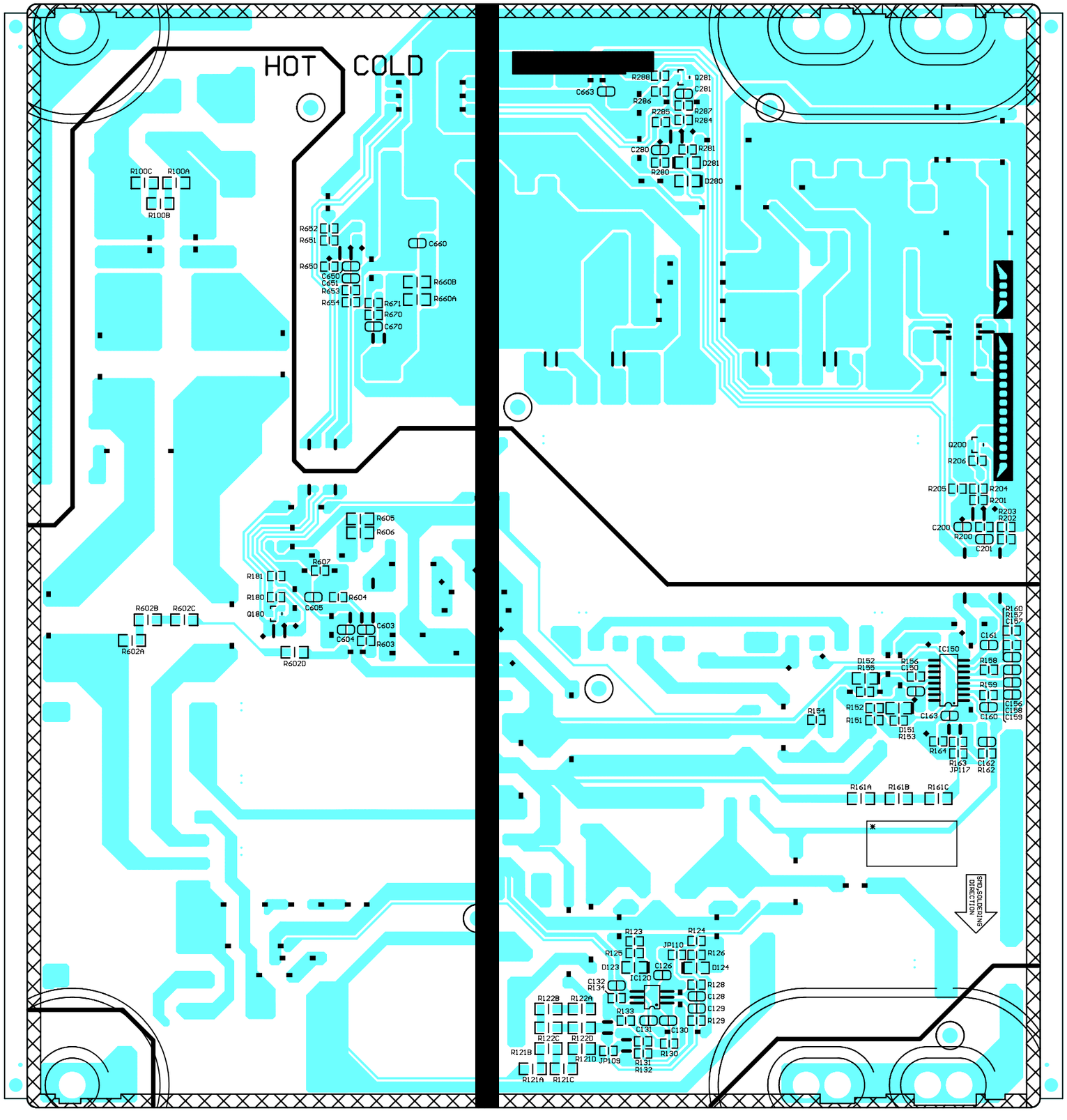
Because a hot chassis ground is present in the power supply circuit, an isolation transformer must be used when repairing. Also, in order to have the ability to increase the input slowly, when troubleshooting this type of power supply circuit, a variable isolation transformer is required.

CAUTION !
Fixed voltage (or Auto voltage selectable) power supply circuit is used in this unit. If Main Fuse (F100) is blown , check to see that all components in the power supply circuit are not defective before you connect the AC plug to the AC power supply. Otherwise it may cause some components in the power supply circuit to fail.

NOTE:
The voltage for parts in hot circuit is measured using hot GND as a common terminal.

CAUTION !
For continued protection against fire hazard, replace only with the same type fuse.

Power Supply CBA Bottom View



Because a hot chassis ground is present in the power supply circuit, an isolation transformer must be used when repairing. Also, in order to have the ability to increase the input slowly, when troubleshooting this type of power supply circuit, a variable isolation transformer is required.

CAUTION !
Fixed voltage (or Auto voltage selectable) power supply circuit is used in this unit. If Main Fuse (F100) is blown , check to see that all components in the power supply circuit are not defective before you connect the AC plug to the AC power supply. Otherwise it may cause some components in the power supply circuit to fail.

NOTE:
The voltage for parts in hot circuit is measured using hot GND as a common terminal.

CAUTION !
For continued protection against fire hazard, replace only with the same type fuse.

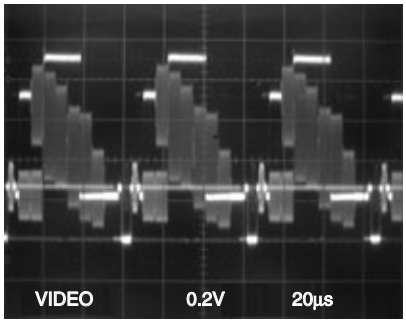
WAVEFORMS

WF1 ~ WF7 = Waveforms to be observed at
Waveform check points.
(Shown in Schematic Diagram.)

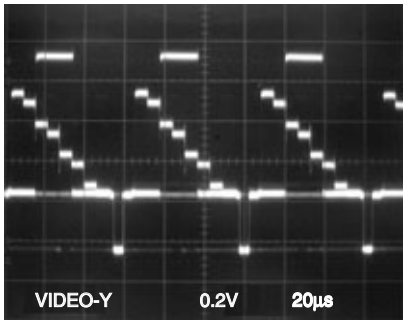
Input: PAL Color Bar Signal (with 1kHz Audio Signal)

WF1 Pin 18 of CN2104

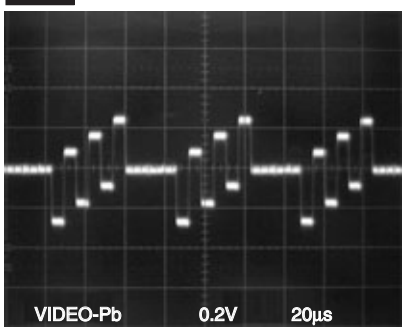
(VIDEO IN)



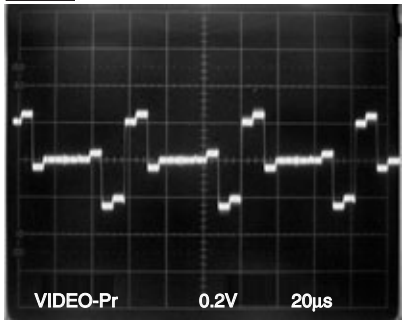
(COMPONENT IN)



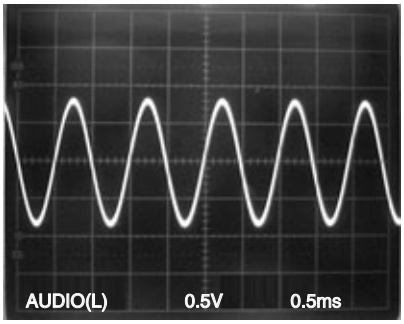
WF2 Pin 20 of CN2104



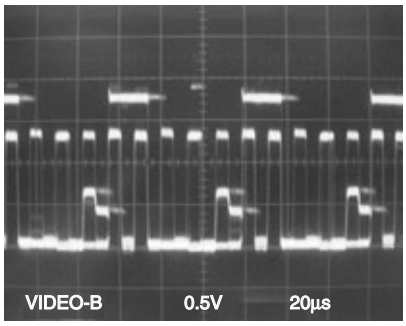
WF3 Pin 22 of CN2104



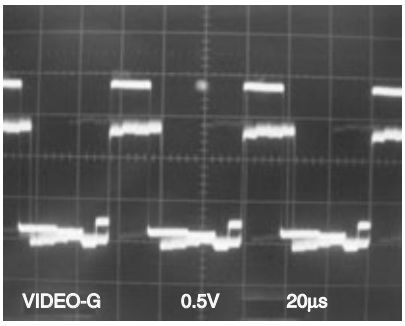
WF4 Pin 24 of CN2104



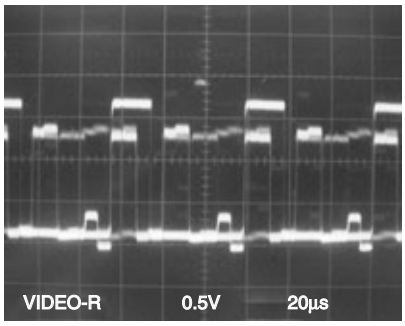
WF5 Pin 1 of CN2103



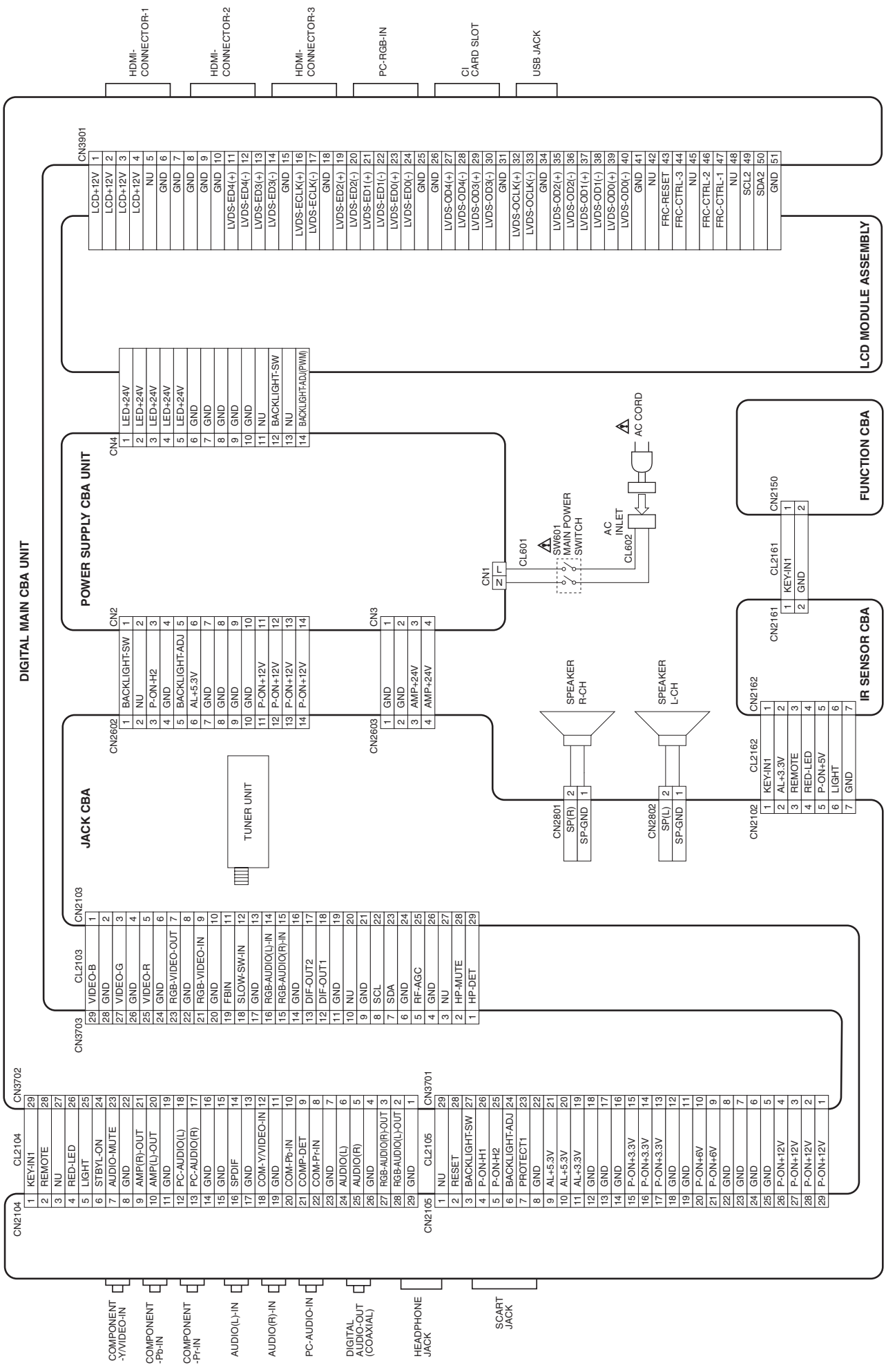
WF6 Pin 3 of CN2103



WF7 Pin 5 of CN2103



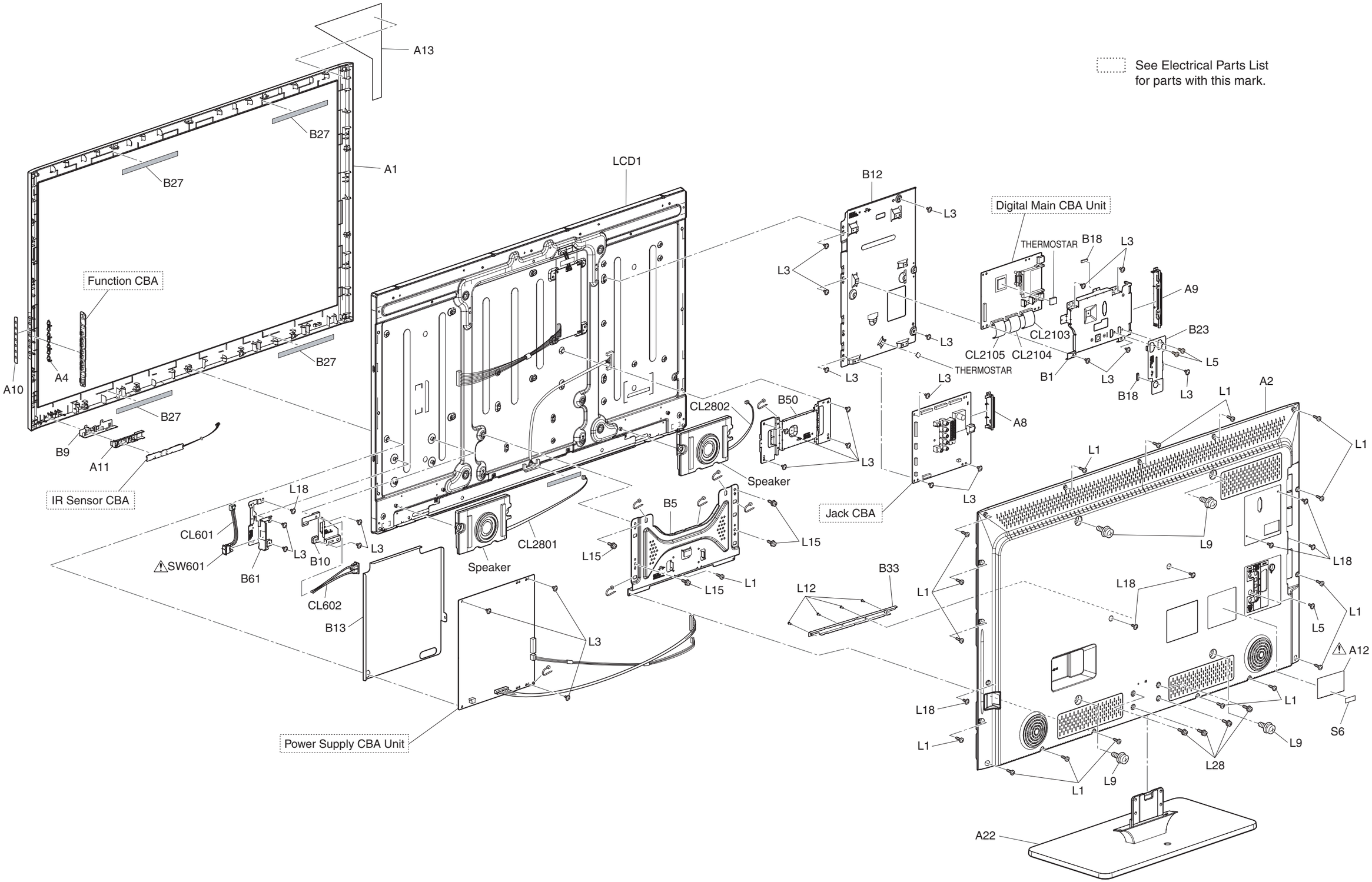
WIRING DIAGRAMS



EXPLODED VIEWS

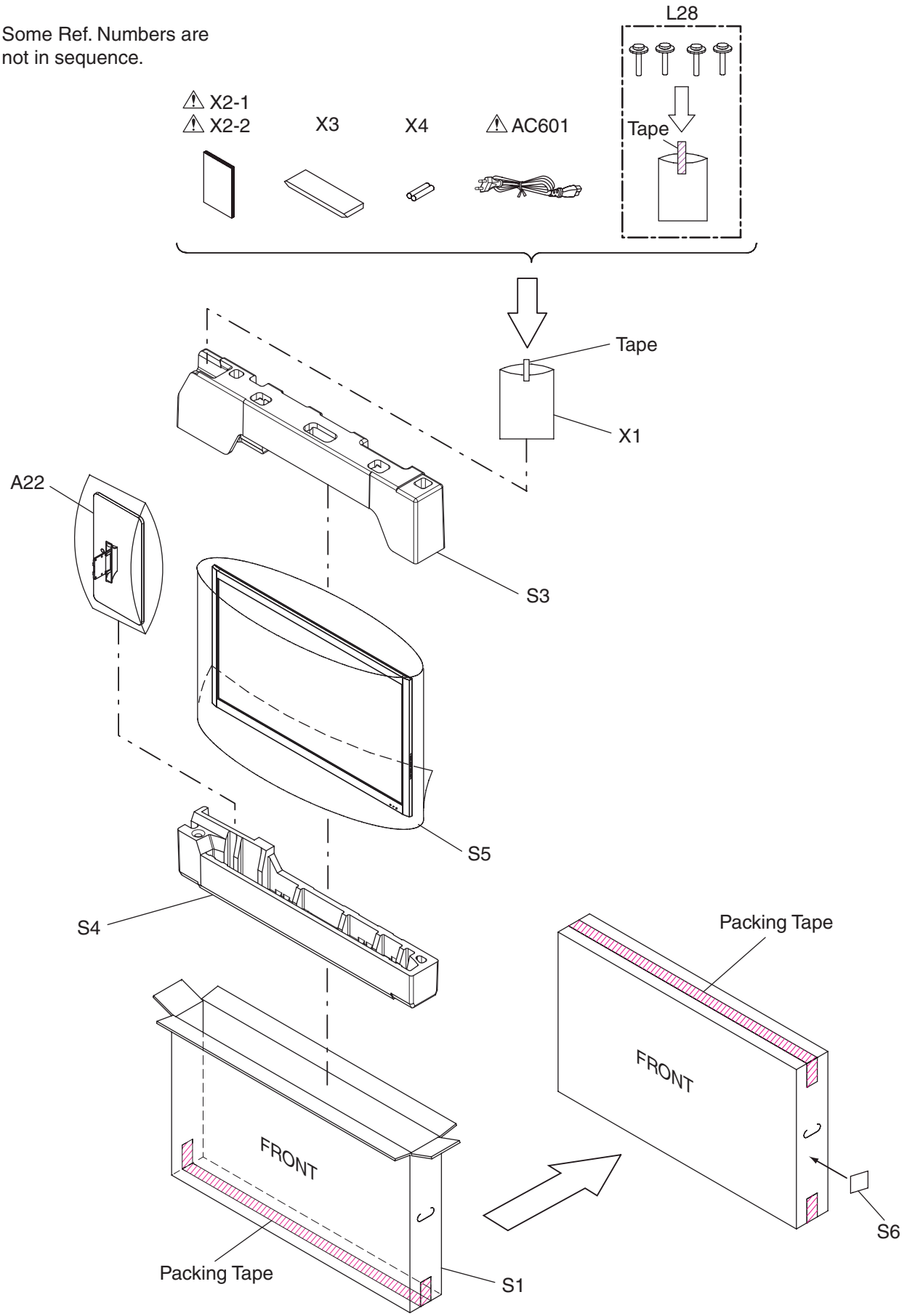
Cabinet

See Electrical Parts List for parts with this mark.



Packing

Some Ref. Numbers are not in sequence.



MECHANICAL PARTS LIST

PRODUCT SAFETY NOTE: Products marked with a ⚠ have special characteristics important to safety. Before replacing any of these components, read carefully the product safety notice in this service manual. Don't degrade the safety of the product through improper servicing.

NOTE: Parts that are not assigned part numbers (---------) are not available.

Ref. No.	Description	Part No.
A1	FRONT CABINET A13P0EP	1EM027085
A2	REAR CABINET A13P0EP	1EM027086
A4	FUNCTION KNOB(LOW) A13L0EP	1EM225545
A8	JACK HOLDER(A) A13L0EP	1EM225543
A9	JACK HOLDER(D) A13L0EP	1EM225544
A10	CONTROL PLATE A13L0EP	1EM330197
A11	SENSOR LED LENS A13L0EP	1EM225546
A13	POP LABEL A13P0EP	---------
B1	SHIELD BOX A13L0EP	1EM125875
B9	SENSOR SHIELD A13L0EP	1EM330119
B10	AC INLET HOLDER A13P0EP	1EM225443
B12	PCB HOLDER A13P0EP	1EM027088
B18	GASKET A8AF0UH	1EM425861
B27	CLOTH(10X180XT0.5) L0336JG	0EM408827
B33	BRACKET A01P7UH	1EM328617
B61	SW HOLDER A13P0EP	1EM225503
CL601	WIRE ASSEMBLY 2PIN AC-SW 2PIN/100MM/ AWG18/WB	WX1A13P0-220
CL602	WIRE ASSEMBLY 2PIN AC-INLET 2PIN/ 135MM/AWG18/WB	WX1A13P0-229
CL2103	WIRE ASSEMBLY 29PIN FFC 29PIN/48MM/ FFC	WX1A13P0-101
CL2104	WIRE ASSEMBLY 29PIN FFC 29PIN/48MM/ FFC	WX1A13P0-101
CL2105	WIRE ASSEMBLY 29PIN FFC 29PIN/48MM/ FFC	WX1A13P0-101
L3	ASSEMBLED SCREW(D9/M3X5) A14P1UH	1EM433298
L12	SCREW P-TIGHT M3X8 BIND HEAD+	GBJP3080
SW601⚠	SWITCH POWER SDDJE35600	SPEVBA0AL003
	THERMOSTAR TMS-L-2(12*12HC)	XK10000X4003
PACKING		
S5	SET BAG A03P0EP	1EM327238
ACCESSORY		
X3	REMOTE CONTROL NH208RD	NH208RD

Ref. No.	Description	Part No.
A12⚠	RATING LABEL A13P0EP	---------
A22	40W STAND ASSEMBLY A13P0EP	1EM027109
B5	STAND BRACKET A13P0EP	1EM027087
B13	SEPARATION SHEET A11P4UH	1EM225404
B18	GASKET A8AF0UH	1EM425861
B23	TUNER SHIELD A13P0EP	1EM330058
B50	FRC SHIELD A13P1EP	1EM126073
CL2801	WIRE ASSEMBLY 2PIN 2PIN/530MM/AWG24/ RB	WX1A13P0-234
CL2802	WIRE ASSEMBLY 2PIN 2PIN/140MM/AWG24/ RB	WX1A13P0-213
L1	SCREW P-TIGHT 3X10 BIND HEAD+	GBHP3100
L3	ASSEMBLED SCREW(D9/M3X5) A14P1UH	1EM433298
L5	SCREW S-TIGHT M3X8 BIND HEAD+	GBHS3080
L9	DOUBLE SEMS SCREW M8X18 M8X18	FPH38180
L15	DOUBLE SEMS SCREW M4X10 + BLK	FPH34100
L18	SCREW S-TIGHT M3X6	GCHS3060
L28	STAND SCREW KIT A13P0EP	1ESA28729
LCD1	LCD MODULE LTA40OHM13	UDULCD0SM027
	SPEAKER MAGNETIC BOX 8OHM/10W SB-05N44F	DS08050XQ009
PACKING		
S1	CARTON A13P0EP	1EM331217A
S3	STYROFOAM TOP A13P0EP	1EM028005
S4	STYROFOAM BOTTOM A13P0EP	1EM028006
S6	SERIAL NO. LABEL L9750UA	---------
ACCESSORIES		
AC601⚠	AC CORD W/O A GND WIRE CEE/ 162/ NO/ BLACK or	WAE0162LTE01
⚠	CORD W/O A GND WIRE CB/162/NO/BLACK	WAE0162LW003
X1	BAG POLYETHYLENE 235X365XT0.03	0EM408420A
X2-1⚠	OWNERS MANUAL(WE-10) A13P0EP	1EMN28019
X2-2⚠	OWNERS MANUAL(PL-14) A13P0EP	1EMN28020
X4	BATTERY DRY R03REL/2PA	XB00M00MS001

ELECTRICAL PARTS LIST

PRODUCT SAFETY NOTE: Products marked with a ⚠ have special characteristics important to safety. Before replacing any of these components, read carefully the product safety notice in this service manual. Don't degrade the safety of the product through improper servicing.

NOTES:

1. Parts that are not assigned part numbers (---------) are not available.
2. Tolerance of Capacitors and Resistors are noted with the following symbols.

C.....±0.25% D.....±0.5% F.....±1%

G.....±2% J.....±5% K.....±10%

M.....±20% N.....±30% Z.....+80/-20%

DIGITAL MAIN CBA UNIT

Ref. No.	Description	Part No.
	DIGITAL MAIN CBA UNIT	A13P0MMA-002

JACK ASSEMBLY

Ref. No.	Description	Part No.
	JACK ASSEMBLY Consists of the following:	A13P0MJC-001
	JACK CBA FUNCTION CBA IR SENSOR CBA	--------- --------- ---------

JACK CBA

Ref. No.	Description	Part No.
	JACK CBA Consists of the following:	---------
	CAPACITORS	
C2103	CHIP CERAMIC CAP.(1608) F Z 0.1 F/50V or	CHD1JZ30F104
	CAP CHIP 1608 Z/Y5V/0.1 F/50V	CHD104EYA036
C2104	CHIP CERAMIC CAP.(1608) CH J 100pF/50V or	CHD1JJ3CH101
	CAP CHIP 1608 J/C0G/100pF/50V	CHD101EYA030
C2105	CHIP CERAMIC CAP.(1608) CH J 100pF/50V or	CHD1JJ3CH101
	CAP CHIP 1608 J/C0G/100pF/50V	CHD101EYA030
C2106	CHIP CERAMIC CAP.(1608) CH J 100pF/50V or	CHD1JJ3CH101
	CAP CHIP 1608 J/C0G/100pF/50V	CHD101EYA030
C2107	CHIP CERAMIC CAP.(1608) CH J 100pF/50V or	CHD1JJ3CH101
	CAP CHIP 1608 J/C0G/100pF/50V	CHD101EYA030
C2109	CHIP CERAMIC CAP.(1608) CH J 100pF/50V or	CHD1JJ3CH101
	CAP CHIP 1608 J/C0G/100pF/50V	CHD101EYA030
C2110	CHIP CERAMIC CAP.(1608) CH J 100pF/50V or	CHD1JJ3CH101
	CAP CHIP 1608 J/C0G/100pF/50V	CHD101EYA030
C2111	CHIP CERAMIC CAP.(1608) F Z 0.1 F/50V or	CHD1JZ30F104
	CAP CHIP 1608 Z/Y5V/0.1 F/50V	CHD104EYA036
C2113	CHIP CERAMIC CAP.(1608) F Z 0.1 F/50V or	CHD1JZ30F104
	CAP CHIP 1608 Z/Y5V/0.1 F/50V	CHD104EYA036
C2114	CHIP CERAMIC CAP.(1608) F Z 0.1 F/50V or	CHD1JZ30F104
	CAP CHIP 1608 Z/Y5V/0.1 F/50V	CHD104EYA036
C2115	CHIP CERAMIC CAP.(1608) F Z 0.1 F/50V or	CHD1JZ30F104
	CAP CHIP 1608 Z/Y5V/0.1 F/50V	CHD104EYA036
C2302	ELECTROLYTIC CAP. 220 F/6.3V M H7 or	CE0KMAVSL221
	CAP ELE 220 F/6.3V/M/85 H7	CEA221KSN003
C2303	CHIP CERAMIC CAP. F Z 1 F/10V or	CHD1AZ30F105
	CAP CHIP 1608 Z/Y5V/1 F/10V	CHD105EYA052
C2304	CHIP CERAMIC CAP.(1608) B K 0.047 F/50V	CHD1JK30B473
C2305	CHIP CERAMIC CAP.(1608) CH J 33pF/50V or	CHD1JJ3CH330
	CAP CHIP 1608 J/C0G/33pF/50V	CHD330EYA030
C2306	CHIP CERAMIC CAP.(1608) CH J 33pF/50V or	CHD1JJ3CH330
	CAP CHIP 1608 J/C0G/33pF/50V	CHD330EYA030
C2307	CHIP CERAMIC CAP.(1608) CH D 5.6pF/50V or	CHD1JD3CH5R6
	CAP CHIP 1608 D/C0G/5.6pF/50V	CHD5R6EYA029
C2308	CHIP CERAMIC CAP.(1608) CH D 5.6pF/50V or	CHD1JD3CH5R6
	CAP CHIP 1608 D/C0G/5.6pF/50V	CHD5R6EYA029
C2309	CHIP CERAMIC CAP. F Z 0.01 F/50V	CHD1JZ30F103
C2310	CHIP CERAMIC CAP. F Z 0.01 F/50V	CHD1JZ30F103
C2312	CHIP CERAMIC CAP.(1608) CH J 270pF/50V or	CHD1JJ3CH271
	CAP CHIP 1608 J/C0G/270pF/50V	CHD271EYA030
C2313	CHIP CERAMIC CAP. CH J 220pF/50V or	CHD1JJ3CH221
	CAP CHIP 1608 J/C0G/220pF/50V	CHD221EYA030
C2314	CHIP CERAMIC CAP. CH J 220pF/50V or	CHD1JJ3CH221
	CAP CHIP 1608 J/C0G/220pF/50V	CHD221EYA030
C2318	CHIP CERAMIC CAP. CH J 56pF/50V	CHD1JJ3CH560
C2319	CHIP CERAMIC CAP. CH J 56pF/50V	CHD1JJ3CH560
C2401	CHIP CERAMIC CAP.(1608) B K 2.2 F/10V	CHD1AK30B225
C2601	CHIP CERAMIC CAP.(1608) F Z 0.1 F/50V or	CHD1JZ30F104
	CAP CHIP 1608 Z/Y5V/0.1 F/50V	CHD104EYA036
C2602	ELECTROLYTIC CAP. 100 F/16V M H7 or	CE1CMAVSL101
	CAP ELE 100 F/16V/M/85 H7	CEC101KSN003
C2603	CHIP CERAMIC CAP.(1608) F Z 0.1 F/50V or	CHD1JZ30F104
	CAP CHIP 1608 Z/Y5V/0.1 F/50V	CHD104EYA036
C2604	ELECTROLYTIC CAP. 100 F/16V M H7 or	CE1CMAVSL101
	CAP ELE 100 F/16V/M/85 H7	CEC101KSN003
C2605	CHIP CERAMIC CAP.(1608) F Z 0.1 F/50V or	CHD1JZ30F104
	CAP CHIP 1608 Z/Y5V/0.1 F/50V	CHD104EYA036
C2606	CHIP CERAMIC CAP.(1608) B K 0.01 F/50V or	CHD1JK30B103
	CAP CHIP 1608 K/X7R/0.01 F/50V	CHD103EYA032
C2607	CHIP CERAMIC CAP.(1608) B K 0.01 F/50V or	CHD1JK30B103
	CAP CHIP 1608 K/X7R/0.01 F/50V	CHD103EYA032
C2609	CHIP CERAMIC CAP.(1608) B K 0.01 F/50V or	CHD1JK30B103
	CAP CHIP 1608 K/X7R/0.01 F/50V	CHD103EYA032
C2612	ELECTROLYTIC CAP. 100 F/10V M H7 or	CE1AMAVSL101
	CAP ELE 100 F/10V/M/85 H7	CEB101KSN003
C2624	CHIP CERAMIC CAP.(1608) F Z 0.1 F/50V or	CHD1JZ30F104
	CAP CHIP 1608 Z/Y5V/0.1 F/50V	CHD104EYA036
C2625	CHIP CERAMIC CAP.(1608) CH J 1000pF/50V or	CHD1JJ3CH102
	CAP CHIP 1608 J/C0G/0.001 F/50V	CHD102EYA030
C2627	CHIP CERAMIC CAP. CH J 680pF/50V	CHD1JJ3CH681
C2628	CHIP CERAMIC CAP.(1608) B K 0.22 F/25V or	CHD1EK30B224
	CAP CHIP 1608 BJ/+-10/0.22 F/25V	CHD2240TU011
C2629	ELECTROLYTIC CAP. 100 F/16V M H7 or	CE1CMAVSL101
	CAP ELE 100 F/16V/M/85 H7	CEC101KSN003
C2630	CHIP CERAMIC CAP. (1608) F Z 1 F/16V	CHD1CZ30F105
C2631	CHIP CERAMIC CAP.(1608) B K 0.01 F/50V or	CHD1JK30B103
	CAP CHIP 1608 K/X7R/0.01 F/50V	CHD103EYA032
C2632	CHIP CERAMIC CAP.(2125) F Z 10 F/10V	CHE1AZ30F106
C2633	ELECTROLYTIC CAP. 220 F/6.3V M H7 or	CE0KMAVSL221
	CAP ELE 220 F/6.3V/M/85 H7	CEA221KSN003
C2634	CHIP CERAMIC CAP.(2125) B K 4.7 F/16V	CHE1CK30B475
C2635	CHIP CERAMIC CAP.(1608) F Z 0.1 F/50V or	CHD1JZ30F104
	CAP CHIP 1608 Z/Y5V/0.1 F/50V	CHD104EYA036
C2637	ELECTROLYTIC CAP. 100 F/16V M H7 or	CE1CMAVSL101
	CAP ELE 100 F/16V/M/85 H7	CEC101KSN003
C2638	ELECTROLYTIC CAP. 220 F/10V M H7 or	CE1AMAVSL221
	CAP ELE 220 F/10V/M/85 H7	CEB221KSN003
C2639	CHIP CERAMIC CAP.(2125) F Z 10 F/10V	CHE1AZ30F106
C2640	CHIP CERAMIC CAP.(1608) F Z 0.1 F/50V or	CHD1JZ30F104
	CAP CHIP 1608 Z/Y5V/0.1 F/50V	CHD104EYA036
C2641	CHIP CERAMIC CAP. (1608) F Z 1 F/16V	CHD1CZ30F105

Ref. No.	Description	Part No.
C2642	CHIP CERAMIC CAP.(1608) B K 0.22 F/25V or	CHD1EK30B224
	CAP CHIP 1608 BJ/+-10/0.22 F/25V	CHD2240TU011
C2643	CHIP CERAMIC CAP.(1608) B K 0.01 F/50V or	CHD1JK30B103
	CAP CHIP 1608 K/X7R/0.01 F/50V	CHD103EYA032
C2644	CHIP CERAMIC CAP. CH J 680pF/50V	CHD1JJ3CH681
C2646	CHIP CERAMIC CAP.(2125) B K 4.7 F/16V	CHE1CK30B475
C2647	CHIP CERAMIC CAP.(1608) CH J 1000pF/50V or	CHD1JJ3CH102
	CAP CHIP 1608 J/C0G/0.001 F/50V	CHD102EYA030
C2648	CAP ELE KR1 220 F/35V/M/85 H9.0 or	CEM221KSN014
	CAP ELE 85 220 F/35V/M/85	CEB2210V8005
C2649	CHIP CERAMIC CAP.(1608) F Z 0.1 F/50V or	CHD1JZ30F104
	CAP CHIP 1608 Z/Y5V/0.1 F/50V	CHD104EYA036
C2650	CHIP CERAMIC CAP.(1608) CH J 1000pF/50V or	CHD1JJ3CH102
	CAP CHIP 1608 J/C0G/0.001 F/50V	CHD102EYA030
C2659	CHIP CERAMIC CAP. B K 470pF/50V	CHD1JK30B471
C2660	CHIP CERAMIC CAP.(1608) B K 2.2 F/10V	CHD1AK30B225
C2662	CHIP CERAMIC CAP. (1608) F Z 1 F/16V	CHD1CZ30F105
C2663	ELECTROLYTIC CAP. 220 F/10V M H7 or	CE1AMAVSL221
	CAP ELE 220 F/10V/M/85 H7	CEB221KSN003
C2704	CHIP CERAMIC CAP. CH J 330pF/50V	CHD1JJ3CH331
C2706	CHIP CERAMIC CAP. CH J 330pF/50V	CHD1JJ3CH331
C2707	CHIP CERAMIC CAP.(1608) CH J 33pF/50V or	CHD1JJ3CH330
	CAP CHIP 1608 J/C0G/33pF/50V	CHD330EYA030
C2708	ELECTROLYTIC CAP. 220 F/6.3V M H7 or	CE0KMAVSL221
	CAP ELE 220 F/6.3V/M/85 H7	CEA221KSN003
C2709	CHIP CERAMIC CAP.(1608) CH J 33pF/50V or	CHD1JJ3CH330
	CAP CHIP 1608 J/C0G/33pF/50V	CHD330EYA030
C2711	CHIP CERAMIC CAP.(1608) CH J 100pF/50V or	CHD1JJ3CH101
	CAP CHIP 1608 J/C0G/100pF/50V	CHD101EYA030
C2712	CHIP CERAMIC CAP. CH J 330pF/50V	CHD1JJ3CH331
C2713	CHIP CERAMIC CAP. CH J 330pF/50V	CHD1JJ3CH331
C2717	CHIP CERAMIC CAP. F Z 1 F/10V or	CHD1AZ30F105
	CAP CHIP 1608 Z/Y5V/1 F/10V	CHD105EYA052
C2718	CHIP CERAMIC CAP.(1608) CH J 33pF/50V or	CHD1JJ3CH330
	CAP CHIP 1608 J/C0G/33pF/50V	CHD330EYA030
C2719	ELECTROLYTIC CAP. 47 F/10V M H7 or	CE1AMAVSL470
	CAP ELE 47 F/10V/M/85 H7	CEB470KSN003
C2720	CHIP CERAMIC CAP.(1608) CH J 100pF/50V or	CHD1JJ3CH101
	CAP CHIP 1608 J/C0G/100pF/50V	CHD101EYA030
C2721	CHIP CERAMIC CAP.(1608) F Z 0.1 F/25V	CHD1EZ30F104
C2722	CHIP CERAMIC CAP.(2125) F Z 10 F/10V	CHE1AZ30F106
C2723	ELECTROLYTIC CAP. 220 F/10V M H7 or	CE1AMAVSL221
	CAP ELE 220 F/10V/M/85 H7	CEB221KSN003
C2724	ELECTROLYTIC CAP. 220 F/10V M H7 or	CE1AMAVSL221
	CAP ELE 220 F/10V/M/85 H7	CEB221KSN003
C2726	CHIP CERAMIC CAP.(1608) CH J 47pF/50V or	CHD1JJ3CH470
	CAP CHIP 1608 J/C0G/47pF/50V	CHD470EYA030
C2728	CHIP CERAMIC CAP.(1608) CH J 33pF/50V or	CHD1JJ3CH330
	CAP CHIP 1608 J/C0G/33pF/50V	CHD330EYA030
C2729	CHIP CERAMIC CAP.(1608) CH J 33pF/50V or	CHD1JJ3CH330
	CAP CHIP 1608 J/C0G/33pF/50V	CHD330EYA030
C2730	CHIP CERAMIC CAP.(1608) B K 0.047 F/50V	CHD1JK30B473
C2731	CHIP CERAMIC CAP. F Z 1 F/10V or	CHD1AZ30F105
	CAP CHIP 1608 Z/Y5V/1 F/10V	CHD105EYA052
C2732	CHIP CERAMIC CAP.(1608) B K 0.047 F/50V	CHD1JK30B473
C2735	CHIP CERAMIC CAP. B K 2200pF/50V	CHD1JK30B222
C2736	CHIP CERAMIC CAP. B K 2200pF/50V	CHD1JK30B222
C2737	CHIP CERAMIC CAP. (1608) B K 1 F/16V	CHD1CK30B105
C2738	CHIP CERAMIC CAP. (1608) B K 1 F/16V	CHD1CK30B105
C2801	CHIP CERAMIC CAP.(1608) B K 1000pF/50V or	CHD1JK30B102
	CAP CHIP 1608 K/X7R/0.001 F/50V	CHD102EYA032
C2802	CHIP CERAMIC CAP.(1608) B K 1000pF/50V or	CHD1JK30B102
	CAP CHIP 1608 K/X7R/0.001 F/50V	CHD102EYA032
C2803	CHIP CERAMIC CAP.(1608) B K 0.1 F/50V or	CHD1JK30B104
	CAP CHIP 1608 K/X7R/0.1 F/50V	CHD104EYA032

Ref. No.	Description	Part No.
C2804	CHIP CERAMIC CAP.(1608) CH J 1000pF/50V or	CHD1JJ3CH102
	CAP CHIP 1608 J/C0G/0.001 F/50V	CHD102EYA030
C2805	CHIP CERAMIC CAP. (1608) B K 1 F/16V	CHD1CK30B105
C2806	CHIP CERAMIC CAP. (1608) B K 1 F/16V	CHD1CK30B105
C2807	CAP ELE KR1 220 F/35V/M/85 H9.0 or	CEM221KSN014
	CAP ELE 85 220 F/35V/M/85	CEB2210V8005
C2808	CAP ELE KR1 220 F/35V/M/85 H9.0 or	CEM221KSN014
	CAP ELE 85 220 F/35V/M/85	CEB2210V8005
C2809	CHIP CERAMIC CAP.(1608) F Z 0.22 F/50V or	CHD1JZ30F224
	CAP CHIP 1608 Z/Y5V/0.22 F/50V	CHD224EYA036
C2810	CHIP CERAMIC CAP.(1608) F Z 0.22 F/50V or	CHD1JZ30F224
	CAP CHIP 1608 Z/Y5V/0.22 F/50V	CHD224EYA036
C2811	CHIP CERAMIC CAP.(1608) B K 0.1 F/50V or	CHD1JK30B104
	CAP CHIP 1608 K/X7R/0.1 F/50V	CHD104EYA032
C2812	CHIP CERAMIC CAP.(1608) B K 0.1 F/50V or	CHD1JK30B104
	CAP CHIP 1608 K/X7R/0.1 F/50V	CHD104EYA032
C2813	CHIP CERAMIC CAP.(1608) B K 0.1 F/50V or	CHD1JK30B104
	CAP CHIP 1608 K/X7R/0.1 F/50V	CHD104EYA032
C2814	CHIP CERAMIC CAP.(1608) B K 0.1 F/50V or	CHD1JK30B104
	CAP CHIP 1608 K/X7R/0.1 F/50V	CHD104EYA032
C2815	CHIP CERAMIC CAP.(1608) B K 0.47 F/16V	CHD1CK30B474
C2816	CAP CHIP 3216 B M 10 F/16V or	CA1C106TE143
	CHIP CERAMIC CAP. B K 10 F/16V	CHF1CK30B106
C2817	CAP CHIP 3216 B M 10 F/16V or	CA1C106TE143
	CHIP CERAMIC CAP. B K 10 F/16V	CHF1CK30B106
C2818	CAP CHIP 3216 B M 10 F/16V or	CA1C106TE143
	CHIP CERAMIC CAP. B K 10 F/16V	CHF1CK30B106
C2819	CHIP CERAMIC CAP.(1608) B K 0.1 F/16V	CHD1CK30B104
C2821	CHIP CERAMIC CAP. B K 470pF/50V	CHD1JK30B471
C2822	CHIP CERAMIC CAP. B K 470pF/50V	CHD1JK30B471
C2823	RES CHIP 1608 1/10W 0 Ω or	RRXA000HH014
	RES CHIP 1608 1/10W J 0 Ω or	RRXA000YF002
	RES CHIP 1608 1/10W 0 Ω or	RRZ000RYL002
	RES CHIP 1608 1/10W 0 Ω	RRJ000WAL002
C2826	CAP ELE KR1 220 F/35V/M/85 H9.0 or	CEM221KSN014
	CAP ELE 85 220 F/35V/M/85	CEB2210V8005
C2827	CAP ELE KR1 220 F/35V/M/85 H9.0 or	CEM221KSN014
	CAP ELE 85 220 F/35V/M/85	CEB2210V8005
C2828	CAP CHIP 3216 B M 10 F/16V or	CA1C106TE143
	CHIP CERAMIC CAP. B K 10 F/16V	CHF1CK30B106
C2829	CAP ELE KR1 220 F/35V/M/85 H9.0 or	CEM221KSN014
	CAP ELE 85 220 F/35V/M/85	CEB2210V8005
C2831	CHIP CERAMIC CAP.(1608) CH J 1000pF/50V or	CHD1JJ3CH102
	CAP CHIP 1608 J/C0G/0.001 F/50V	CHD102EYA030
C2832	CHIP CERAMIC CAP.(1608) B K 0.01 F/50V or	CHD1JK30B103
	CAP CHIP 1608 K/X7R/0.01 F/50V	CHD103EYA032
C2833	CAP ELE KR1 220 F/35V/M/85 H9.0 or	CEM221KSN014
	CAP ELE 85 220 F/35V/M/85	CEB2210V8005
C2834	CAP ELE KR1 220 F/35V/M/85 H9.0 or	CEM221KSN014
	CAP ELE 85 220 F/35V/M/85	CEB2210V8005
	CONNECTORS	
CN2102	CONNECTOR PRINT OSU C S B7B-PH-K-S(LF)(S or	J3PHC07JG029
	CONNECTOR PRINT OSU JS-1125-07(K) or	J3JT07CHY001
	CONNECTOR PRINT OSU C S 440054-7	J344C07AP001
CN2103	FFC CONNECTOR IMSA-9615S-29A-PP-A or	JC96J29ER007
	CONNECTOR PRINT MES 00 6232 029 006 800+ or	JC62G29UG026
	CONNECTOR PRINT MES 29 S 1.0-11-29P	JC1129JSH001
CN2104	FFC CONNECTOR IMSA-9615S-29A-PP-A or	JC96J29ER007
	CONNECTOR PRINT MES 00 6232 029 006 800+ or	JC62G29UG026
	CONNECTOR PRINT MES 29 S 1.0-11-29P	JC1129JSH001
CN2105	FFC CONNECTOR IMSA-9615S-29A-PP-A or	JC96J29ER007
	CONNECTOR PRINT MES 00 6232 029 006 800+ or	JC62G29UG026
	CONNECTOR PRINT MES 29 S 1.0-11-29P	JC1129JSH001

Ref. No.	Description	Part No.
CN2602	CONNECTOR PRINT OSU B14B-PH-K-S(LF)(SN) or	J3PHC14JG029
	CONNECTOR PRINT OSU JS-1125-14(K) or	J3JT14CHY001
	CONNECTOR PRINT OSU C S 1-440054-4	J344C14AP001
CN2603	CONNECTOR PRINT OSU JS-1125-02KK or	J3JT04CHY002
	PH CONNECTOR TOP 4P B4B-PH-K-S (LF)(SN)	J3PHC04JG029
CN2801	CONNECTOR BASE 2P(EH) B 2B-EH-A(LF)(SN) or	J3EHC02JG010
	CONNECTOR PRINT OSU C S 440052-2	J344C02AP011
CN2802	PH CONNECTOR TOP 2P B2B-PH-K-S (LF)(SN) or	J3PHC02JG029
	CONNECTOR PRINT OSU JS-1125-02KK or	J3JT02CHY002
	CONNECTOR PRINT OSU TOP 2P 440054-2	J344C02AP001
	DIODES	
D2401	SWITCHING DIODE 1SS133(T-77) or	QDTZ001SS133
	DIODE SWITCHING HSS4148TE-E or	QDTZ0HSS4148
	DIODE SWITCHING 1N4148-F0021	NDTZ01N4148F
D2402	DIODE ZENER 5V6BSB-T26 or	NDTB5R6BST26
	DIODE ZENER HZS5.6NB2TE-EQ	QDTB0HZS5R6N
D2601	DIODE ZENER 1ZB18BB or	NDWZ0001ZB18
	DIODE ZENER 1N4746A B0 18V	NDLZ01N4746A
D2602	SWITCHING DIODE 1SS133(T-77) or	QDTZ001SS133
	DIODE SWITCHING HSS4148TE-E or	QDTZ0HSS4148
	DIODE SWITCHING 1N4148-F0021	NDTZ01N4148F
D2604	SCHOTTKY BARRIER DIODE SB140	NDWZ000SB140
D2608	DIODE ZENER 6V8BSB-T26 or	NDTB6R8BST26
	DIODE ZENER HZS6.8NB2TE-EQ	QDTB0HZS6R8N
D2611	DIODE ZENER 6V8BSB-T26 or	NDTB6R8BST26
	DIODE ZENER HZS6.8NB2TE-EQ	QDTB0HZS6R8N
D2612	SWITCHING DIODE 1SS133(T-77) or	QDTZ001SS133
	DIODE SWITCHING HSS4148TE-E or	QDTZ0HSS4148
	DIODE SWITCHING 1N4148-F0021	NDTZ01N4148F
D2613	SWITCHING DIODE 1SS133(T-77) or	QDTZ001SS133
	DIODE SWITCHING HSS4148TE-E or	QDTZ0HSS4148
	DIODE SWITCHING 1N4148-F0021	NDTZ01N4148F
D2614	SWITCHING DIODE 1SS133(T-77) or	QDTZ001SS133
	DIODE SWITCHING HSS4148TE-E or	QDTZ0HSS4148
	DIODE SWITCHING 1N4148-F0021	NDTZ01N4148F
D2616	SWITCHING DIODE 1SS400 TE61 or	QD1Z001SS400
	SWITCHING DIODE KDS160E-RTK/P or	ND1ZKDS160EP
	DIODE SWITCHING HSC119 TRF -E or	QD1Z00HSC119
	DIODE SWITCHING SMD 1SS400ST(SOD-523)	ND1Z1SS400ST
D2701	ZENER DIODE EDZTE61 5.6B or	QD1B00EDZ5R6
	DIODE ZENER SMD 015AZ5.6 Y or	QD1Y015AZ5R6
	ZENER DIODE MM5Z5V6B or	ND1BMM5Z5V6B
	DIODE ZENER SMD RKZ5.6B2KJR1	QD1B00RKZ5R6
D2702	ZENER DIODE EDZTE61 5.6B or	QD1B00EDZ5R6
	DIODE ZENER SMD 015AZ5.6 Y or	QD1Y015AZ5R6
	ZENER DIODE MM5Z5V6B or	ND1BMM5Z5V6B
	DIODE ZENER SMD RKZ5.6B2KJR1	QD1B00RKZ5R6
D2703	DIODE ZENER 5V6BSB-T26 or	NDTB5R6BST26
	DIODE ZENER HZS5.6NB2TE-EQ	QDTB0HZS5R6N
D2704	DIODE ZENER 5V6BSB-T26 or	NDTB5R6BST26
	DIODE ZENER HZS5.6NB2TE-EQ	QDTB0HZS5R6N
D2705	ZENER DIODE EDZTE61 5.6B or	QD1B00EDZ5R6
	DIODE ZENER SMD 015AZ5.6 Y or	QD1Y015AZ5R6
	ZENER DIODE MM5Z5V6B or	ND1BMM5Z5V6B
	DIODE ZENER SMD RKZ5.6B2KJR1	QD1B00RKZ5R6
D2706	ZENER DIODE EDZTE61 5.6B or	QD1B00EDZ5R6
	DIODE ZENER SMD 015AZ5.6 Y or	QD1Y015AZ5R6
	ZENER DIODE MM5Z5V6B or	ND1BMM5Z5V6B
	DIODE ZENER SMD RKZ5.6B2KJR1	QD1B00RKZ5R6
D2707	DIODE ZENER 5V6BSB-T26 or	NDTB5R6BST26
	DIODE ZENER HZS5.6NB2TE-EQ	QDTB0HZS5R6N
D2708	DIODE ZENER 5V6BSB-T26 or	NDTB5R6BST26
	DIODE ZENER HZS5.6NB2TE-EQ	QDTB0HZS5R6N
D2709	DIODE ZENER 3V9BSB-T26 or	NDTB3R9BST26
	DIODE ZENER HZS3.9NB2TE-EQ	QDTB0HZS3R9N
D2710	ZENER DIODE EDZTE61 5.6B or	QD1B00EDZ5R6
	DIODE ZENER SMD 015AZ5.6 Y or	QD1Y015AZ5R6
	ZENER DIODE MM5Z5V6B or	ND1BMM5Z5V6B
	DIODE ZENER SMD RKZ5.6B2KJR1	QD1B00RKZ5R6
D2711	ZENER DIODE EDZTE61 5.6B or	QD1B00EDZ5R6
	DIODE ZENER SMD 015AZ5.6 Y or	QD1Y015AZ5R6
	ZENER DIODE MM5Z5V6B or	ND1BMM5Z5V6B
	DIODE ZENER SMD RKZ5.6B2KJR1	QD1B00RKZ5R6
D2712	ZENER DIODE EDZTE61 5.6B or	QD1B00EDZ5R6
	DIODE ZENER SMD 015AZ5.6 Y or	QD1Y015AZ5R6
	ZENER DIODE MM5Z5V6B or	ND1BMM5Z5V6B
	DIODE ZENER SMD RKZ5.6B2KJR1	QD1B00RKZ5R6
D2713	ZENER DIODE EDZTE61 5.6B or	QD1B00EDZ5R6
	DIODE ZENER SMD 015AZ5.6 Y or	QD1Y015AZ5R6
	ZENER DIODE MM5Z5V6B or	ND1BMM5Z5V6B
	DIODE ZENER SMD RKZ5.6B2KJR1	QD1B00RKZ5R6
D2714	ZENER DIODE EDZTE61 5.6B or	QD1B00EDZ5R6
	DIODE ZENER SMD 015AZ5.6 Y or	QD1Y015AZ5R6
	ZENER DIODE MM5Z5V6B or	ND1BMM5Z5V6B
	DIODE ZENER SMD RKZ5.6B2KJR1	QD1B00RKZ5R6
D2715	ZENER DIODE EDZTE61 5.6B or	QD1B00EDZ5R6
	DIODE ZENER SMD 015AZ5.6 Y or	QD1Y015AZ5R6
	ZENER DIODE MM5Z5V6B or	ND1BMM5Z5V6B
	DIODE ZENER SMD RKZ5.6B2KJR1	QD1B00RKZ5R6
D2716	SWITCHING DIODE 1SS133(T-77) or	QDTZ001SS133
	DIODE SWITCHING HSS4148TE-E or	QDTZ0HSS4148
	DIODE SWITCHING 1N4148-F0021	NDTZ01N4148F
D2717	DIODE ZENER 3V9BSB-T26 or	NDTB3R9BST26
	DIODE ZENER HZS3.9NB2TE-EQ	QDTB0HZS3R9N
D2718	ZENER DIODE EDZTE61 5.6B or	QD1B00EDZ5R6
	DIODE ZENER SMD 015AZ5.6 Y or	QD1Y015AZ5R6
	ZENER DIODE MM5Z5V6B or	ND1BMM5Z5V6B
	DIODE ZENER SMD RKZ5.6B2KJR1	QD1B00RKZ5R6
D2719	DIODE ZENER 5V6BSB-T26 or	NDTB5R6BST26
	DIODE ZENER HZS5.6NB2TE-EQ	QDTB0HZS5R6N
D2720	ZENER DIODE EDZTE61 5.6B or	QD1B00EDZ5R6
	DIODE ZENER SMD 015AZ5.6 Y or	QD1Y015AZ5R6
	ZENER DIODE MM5Z5V6B or	ND1BMM5Z5V6B
	DIODE ZENER SMD RKZ5.6B2KJR1	QD1B00RKZ5R6
D2721	DIODE ZENER 5V6BSB-T26 or	NDTB5R6BST26
	DIODE ZENER HZS5.6NB2TE-EQ	QDTB0HZS5R6N
D2802	DIODE ZENER 30BSB-T26 or	NDTB030BST26
	DIODE ZENER HZS30NB2TE-EQ	QDTBHZS30NB2
D2803	DIODE ZENER 30BSB-T26 or	NDTB030BST26
	DIODE ZENER HZS30NB2TE-EQ	QDTBHZS30NB2
	ICS	
IC2602	IC DC-DC CONVERTER BD9329EFJ-E2	QSCA0T0RM201
IC2603	IC DC-DC CONVERTER BD9329EFJ-E2	QSCA0T0RM201
IC2605	REGULATOR MM1565AFBE or	QSZBA0TMM165
	IC REGULATOR MM1565AFBEH	QSCA0T0MM326
IC2701	IC HEADPHONE AMP BH3547F SOP 8PIN	QSZBA0TRM119
IC2801	IC D-CLASS POWER AMPLIFER R2A15122FP-W00R/HQFP	QSCA0T0HT005
	COILS	
L2301	WIRE COPPER 6111-06003-0120 or	XZ40C0SHG002
	WIRE COPPER JP0.6MM	XZ40C0AKM001
L2302	CHIP INDUCTOR LK1608R12K-T or	LLACKB3TUR12
	COIL CHIP FERITE INDUCTOR SDFL1608LR12KT(F) or	LLFR12SSN011
	COIL CHIP INDUCTANS CL160808T-R12K-N	LLFR120GN002
L2303	CHIP INDUCTOR LK1608R12K-T or	LLACKB3TUR12
	COIL CHIP FERITE INDUCTOR SDFL1608LR12KT(F) or	LLFR12SSN011
	COIL CHIP INDUCTANS CL160808T-R12K-N	LLFR120GN002
L2304	CHIP INDUCTOR LK1608R22K-T or	LLACKB3TUR22
	COIL CHIP FERITE INDUCTOR SDFL1608LR22KT(F) or	LLFR22SSN011

Ref. No.	Description	Part No.
	COIL (CHIP BEADS) CL160808T-R22K-N	LLFR220GN002
L2602	COIL POWER INDUCTORS DIP RCR1010NP-100M	LLF1000SF012
L2603	COIL POWER INDUCTORS DIP RCR1010NP-100M	LLF1000SF012
L2604	CHIP INDUCTER LK1608150M-T or	LLACMB3TU150
	COIL CHIP FERITE INDUCTOR SDFL1608T150MT(F) or	LLF150SSN012
	COIL CHIP INDUCTANS CL160808T-R15K-N	LLFR150GN002
L2605	CHIP INDUCTER LK1608150M-T or	LLACMB3TU150
	COIL CHIP FERITE INDUCTOR SDFL1608T150MT(F) or	LLF150SSN012
	COIL CHIP INDUCTANS CL160808T-R15K-N	LLFR150GN002
L2606	CHIP INDUCTER LK1608150M-T or	LLACMB3TU150
	COIL CHIP FERITE INDUCTOR SDFL1608T150MT(F) or	LLF150SSN012
	COIL CHIP INDUCTANS CL160808T-R15K-N	LLFR150GN002
L2607	CHIP INDUCTER LK1608150M-T or	LLACMB3TU150
	COIL CHIP FERITE INDUCTOR SDFL1608T150MT(F) or	LLF150SSN012
	COIL CHIP INDUCTANS CL160808T-R15K-N	LLFR150GN002
L2608	CHIP INDUCTER LK1608150M-T or	LLACMB3TU150
	COIL CHIP FERITE INDUCTOR SDFL1608T150MT(F) or	LLF150SSN012
	COIL CHIP INDUCTANS CL160808T-R15K-N	LLFR150GN002
L2609	CHIP INDUCTER LK1608150M-T or	LLACMB3TU150
	COIL CHIP FERITE INDUCTOR SDFL1608T150MT(F) or	LLF150SSN012
	COIL CHIP INDUCTANS CL160808T-R15K-N	LLFR150GN002
L2701	INDUCTOR 12 H-J-26T	LLAXJATTU120
L2703	INDUCTOR 4.7 H-J-26T	LLAXJATTU4R7
L2704	INDUCTOR 4.7 H-J-26T	LLAXJATTU4R7
L2705	INDUCTOR 0.22 H-J-26T	LLAXJATTUR22
L2706	INDUCTOR 0.22 H-J-26T	LLAXJATTUR22
L2707	INDUCTOR 0.22 H-J-26T	LLAXJATTUR22
L2708	CHIP INDUCTOR LK16081R8K-T 1.8 H or	LLACKB3TU1R8
	COIL CHIP FERITE INDUCTOR SDFL1608Q1R8KT(F) or	LLF1R8SSN011
	COIL CHIP INDUCTANS CL160808T-1R8K-N	LLF1R80GN002
L2801	COIL RADIAL LHLP10NB330M 33 H	LLF3300TU003
L2802	COIL RADIAL LHLP10NB330M 33 H	LLF3300TU003
	TRANSISTORS	
Q2401	CHIP TRANSISTOR KTA1504S-Y-RTK/P or	NQ1YKTA1504S
	CHIP TRANSISTOR KTA1504S-GR-RTK/P or	NQ14KTA1504S
	PNP TRANSISTOR SMD 2SA1980SFY or	NQ1Y2SA1980S
	PNP TRANSISTOR SMD 2SA1980SFG	NQ1G2SA1980S
Q2402	CHIP TRANSISTOR KTC3875S-Y-RTK/P or	NQ1YKTC3875S
	CHIP TRANSISTOR 2SC2412K T146Z or	QQ1Z2SC2412K
	NPN TRANSISTOR SMD 2SC5343SFG	NQ1G2SC5343S
Q2403	CHIP TRANSISTOR KTC3875S-Y-RTK/P or	NQ1YKTC3875S
	CHIP TRANSISTOR 2SC2412K T146Z or	QQ1Z2SC2412K
	NPN TRANSISTOR SMD 2SC5343SFG	NQ1G2SC5343S
Q2801	CHIP TRANSISTOR KTC3875S-Y-RTK/P or	NQ1YKTC3875S
	CHIP TRANSISTOR 2SC2412K T146Z or	QQ1Z2SC2412K
	NPN TRANSISTOR SMD 2SC5343SFG	NQ1G2SC5343S
Q2803	CHIP TRANSISTOR KTA1504S-Y-RTK/P or	NQ1YKTA1504S
	CHIP TRANSISTOR KTA1504S-GR-RTK/P or	NQ14KTA1504S
	PNP TRANSISTOR SMD 2SA1980SFY or	NQ1Y2SA1980S
	PNP TRANSISTOR SMD 2SA1980SFG	NQ1G2SA1980S
	RESISTORS	
R2101	RES CHIP 1608 1/10W F 4.70k Ω or	RTW4701HH008
	RES CHIP 1608 1/10W F 4.70k Ω or	RTW4701YF002
	RES CHIP 1608 1/10W F 4.70k Ω or	RT4701RYL002
	RES CHIP 1608 1/10W F 4.70k Ω	RT4701WAL002
R2102	RES CHIP 1608 1/10W 0 Ω or	RRXA000HH014
	RES CHIP 1608 1/10W J 0 Ω or	RRXA000YF002
	RES CHIP 1608 1/10W 0 Ω or	RRZ000RYL002
	RES CHIP 1608 1/10W 0 Ω	RRJ000WAL002
R2103	RES CHIP 1608 1/10W 0 Ω or	RRXA000HH014
	RES CHIP 1608 1/10W J 0 Ω or	RRXA000YF002

Ref. No.	Description	Part No.
	RES CHIP 1608 1/10W 0 Ω or	RRZ000RYL002
	RES CHIP 1608 1/10W 0 Ω	RRJ000WAL002
R2104	RES CHIP 1608 1/10W 0 Ω or	RRXA000HH014
	RES CHIP 1608 1/10W J 0 Ω or	RRXA000YF002
	RES CHIP 1608 1/10W 0 Ω or	RRZ000RYL002
	RES CHIP 1608 1/10W 0 Ω	RRJ000WAL002
R2105	RES CHIP 1608 1/10W J 220 Ω or	RRXA221HH013
	RES CHIP 1608 1/10W J 220 Ω or	RRXA221YF002
	RES CHIP 1608 1/10W J 220 Ω or	RRJ221RYL002
	RES CHIP 1608 1/10W J 220 Ω	RRJ221WAL002
R2305	RES CHIP 1608 1/10W J 100 Ω or	RRXA101HH013
	RES CHIP 1608 1/10W J 100 Ω or	RRXA101YF002
	RES CHIP 1608 1/10W J 100 Ω or	RRJ101RYL002
	RES CHIP 1608 1/10W J 100 Ω	RRJ101WAL002
R2306	RES CHIP 1608 1/10W J 100 Ω or	RRXA101HH013
	RES CHIP 1608 1/10W J 100 Ω or	RRXA101YF002
	RES CHIP 1608 1/10W J 100 Ω or	RRJ101RYL002
	RES CHIP 1608 1/10W J 100 Ω	RRJ101WAL002
R2307	RES CHIP 1608 1/10W J 10k Ω or	RRXA103HH013
	RES CHIP 1608 1/10W J 10k Ω or	RRXA103YF002
	RES CHIP 1608 1/10W J 10k Ω or	RRJ103RYL002
	RES CHIP 1608 1/10W J 10k Ω	RRJ103WAL002
R2308	RES CHIP 1608 1/10W 0 Ω or	RRXA000HH014
	RES CHIP 1608 1/10W J 0 Ω or	RRXA000YF002
	RES CHIP 1608 1/10W 0 Ω or	RRZ000RYL002
	RES CHIP 1608 1/10W 0 Ω	RRJ000WAL002
R2309	RES CHIP 1608 1/10W 0 Ω or	RRXA000HH014
	RES CHIP 1608 1/10W J 0 Ω or	RRXA000YF002
	RES CHIP 1608 1/10W 0 Ω or	RRZ000RYL002
	RES CHIP 1608 1/10W 0 Ω	RRJ000WAL002
R2401	RES CHIP 1608 1/10W J 2.7k Ω or	RRXA272HH013
	RES CHIP 1608 1/10W J 2.7k Ω or	RRXA272YF002
	RES CHIP 1608 1/10W J 2.7k Ω or	RRJ272RYL002
	RES CHIP 1608 1/10W J 2.7k Ω	RRJ272WAL002
R2402	RES CHIP 1608 1/10W J 2.7k Ω or	RRXA272HH013
	RES CHIP 1608 1/10W J 2.7k Ω or	RRXA272YF002
	RES CHIP 1608 1/10W J 2.7k Ω or	RRJ272RYL002
	RES CHIP 1608 1/10W J 2.7k Ω	RRJ272WAL002
R2403	RES CHIP 1608 1/10W J 10k Ω or	RRXA103HH013
	RES CHIP 1608 1/10W J 10k Ω or	RRXA103YF002
	RES CHIP 1608 1/10W J 10k Ω or	RRJ103RYL002
	RES CHIP 1608 1/10W J 10k Ω	RRJ103WAL002
R2405	RES CHIP 1608 1/10W J 100 Ω or	RRXA101HH013
	RES CHIP 1608 1/10W J 100 Ω or	RRXA101YF002
	RES CHIP 1608 1/10W J 100 Ω or	RRJ101RYL002
	RES CHIP 1608 1/10W J 100 Ω	RRJ101WAL002
R2406	RES CHIP 1608 1/10W J 10k Ω or	RRXA103HH013
	RES CHIP 1608 1/10W J 10k Ω or	RRXA103YF002
	RES CHIP 1608 1/10W J 10k Ω or	RRJ103RYL002
	RES CHIP 1608 1/10W J 10k Ω	RRJ103WAL002
R2602	WIRE COPPER 6111-06003-0120 or	XZ40C0SHG002
	WIRE COPPER JP0.6MM	XZ40C0AKM001
R2605	RES CHIP 1608 1/10W J 33k Ω or	RRXA333HH013
	RES CHIP 1608 1/10W J 33k Ω or	RRXA333YF002
	RES CHIP 1608 1/10W J 33k Ω or	RRJ333RYL002
	RES CHIP 1608 1/10W J 33k Ω	RRJ333WAL002
R2606	RES CHIP 1608 1/10W J 12k Ω or	RRXA123HH013
	RES CHIP 1608 1/10W J 12k Ω or	RRXA123YF002
	RES CHIP 1608 1/10W J 12k Ω or	RRJ123RYL002
	RES CHIP 1608 1/10W J 12k Ω	RRJ123WAL002
R2612	RES CHIP 1608 1/10W J 10 Ω or	RRXA100HH013
	RES CHIP 1608 1/10W J 10 Ω or	RRXA100YF002
	RES CHIP 1608 1/10W J 10 Ω or	RRJ100RYL002
	RES CHIP 1608 1/10W J 10 Ω	RRJ100WAL002
R2613	RES CARBON FILM 1/4W J 100k Ω or	RCX4104FS002
	RES CARBON FILM T 1/4W J 100k Ω or	RCX4104T1001
	RES CARBON FILM 1/4W J 100k Ω	RCJ104PAK001

Ref. No.	Description	Part No.
R2614	RES CHIP 1608 1/10W J 47k Ω or	RRXA473HH013
	RES CHIP 1608 1/10W J 47k Ω or	RRXA473YF002
	RES CHIP 1608 1/10W J 47k Ω or	RRJ473RYL002
	RES CHIP 1608 1/10W J 47k Ω	RRJ473WAL002
R2615	RES CHIP 1608 1/10W F 43.0k Ω or	RTW4302HH008
	RES CHIP 1608 1/10W F 43.0k Ω or	RTW4302YF002
	RES CHIP 1608 1/10W F 43k Ω or	RT4302RYL002
	RES CHIP 1608 1/10W F 43.0k Ω	RT4302WAL002
R2616	RES CHIP 1608 1/10W F 30.0k Ω or	RTW3002HH008
	RES CHIP 1608 1/10W F 30.0k Ω or	RTW3002YF002
	RES CHIP 1608 1/10W F 30k Ω or	RT3002RYL002
	RES CHIP 1608 1/10W F 30.0k Ω	RT3002WAL002
R2617	RES CHIP 1608 1/10W F 11.0k Ω or	RTW1102HH008
	RES CHIP 1608 1/10W F 11.0k Ω or	RTW1102YF002
	RES CHIP 1608 1/10W F 11k Ω or	RT1102RYL002
	RES CHIP 1608 1/10W F 11.0k Ω	RT1102WAL002
R2618	RES CHIP 1608 1/10W 0 Ω or	RRXA000HH014
	RES CHIP 1608 1/10W J 0 Ω or	RRXA000YF002
	RES CHIP 1608 1/10W 0 Ω or	RRZ000RYL002
	RES CHIP 1608 1/10W 0 Ω	RRJ000WAL002
R2619	RES CARBON FILM 1/4W J 68 Ω or	RCX4680FS002
	RES CARBON FILM T 1/4W J 68 Ω or	RCX4680T1001
	RES CARBON FILM 1/4W J 68 Ω	RCJ680PAK001
R2622	RES CHIP 1608 1/10W J 100 Ω or	RRXA101HH013
	RES CHIP 1608 1/10W J 100 Ω or	RRXA101YF002
	RES CHIP 1608 1/10W J 100 Ω or	RRJ101RYL002
	RES CHIP 1608 1/10W J 100 Ω	RRJ101WAL002
R2623	RES CHIP 1608 1/10W F 68.0k Ω or	RTW6802HH008
	RES CHIP 1608 1/10W F 68k Ω or	RT6802RYL002
	RES CHIP 1608 1/10W F 68.0k Ω or	RTW6802YF002
	RES CHIP 1608 1/10W F 68.0k Ω	RT6802WAL002
R2624	RES CHIP 1608 1/10W F 12.0k Ω or	RTW1202HH008
	RES CHIP 1608 1/10W F 12.0k Ω or	RTW1202YF002
	RES CHIP 1608 1/10W F 12k Ω or	RT1202RYL002
	RES CHIP 1608 1/10W F 12.0k Ω	RT1202WAL002
R2625	RES CHIP 1608 1/10W F 39.0k Ω or	RTW3902HH008
	RES CHIP 1608 1/10W F 39.0k Ω or	RTW3902YF002
	RES CHIP 1608 1/10W F 39k Ω or	RT3902RYL002
	RES CHIP 1608 1/10W F 39.0k Ω	RT3902WAL002
R2626	RES CHIP 1608 1/10W 0 Ω or	RRXA000HH014
	RES CHIP 1608 1/10W J 0 Ω or	RRXA000YF002
	RES CHIP 1608 1/10W 0 Ω or	RRZ000RYL002
	RES CHIP 1608 1/10W 0 Ω	RRJ000WAL002
R2627	RES CARBON FILM 1/4W J 68 Ω or	RCX4680FS002
	RES CARBON FILM T 1/4W J 68 Ω or	RCX4680T1001
	RES CARBON FILM 1/4W J 68 Ω	RCJ680PAK001
R2633	RES CHIP 1608 1/10W J 10 Ω or	RRXA100HH013
	RES CHIP 1608 1/10W J 10 Ω or	RRXA100YF002
	RES CHIP 1608 1/10W J 10 Ω or	RRJ100RYL002
	RES CHIP 1608 1/10W J 10 Ω	RRJ100WAL002
R2634	RES CARBON FILM 1/4W J 15k Ω or	RCX4153FS002
	RES CARBON FILM T 1/4W J 15k Ω or	RCX4153T1001
	RES CARBON FILM 1/4W J 15k Ω	RCJ153PAK001
R2635	RES CHIP 1608 1/10W J 15k Ω or	RRXA153HH013
	RES CHIP 1608 1/10W J 15k Ω or	RRXA153YF002
	RES CHIP 1608 1/10W J 15k Ω or	RRJ153RYL002
	RES CHIP 1608 1/10W J 15k Ω	RRJ153WAL002
R2636	RES CHIP 1608 1/10W J 100k Ω or	RRXA104HH013
	RES CHIP 1608 1/10W J 100k Ω or	RRXA104YF002
	RES CHIP 1608 1/10W J 100k Ω or	RRJ104RYL002
	RES CHIP 1608 1/10W J 100k Ω	RRJ104WAL002
R2637	RES CHIP 1608 1/10W J 15k Ω or	RRXA153HH013
	RES CHIP 1608 1/10W J 15k Ω or	RRXA153YF002
	RES CHIP 1608 1/10W J 15k Ω or	RRJ153RYL002
	RES CHIP 1608 1/10W J 15k Ω	RRJ153WAL002
R2638	CHIP RES. 1/10W J 56k Ω or	RRXAJR5Z0563
	RES CHIP 1608 1/10W J 56k Ω or	RRXA563YF002
	RES CHIP 1608 1/10W J 56k Ω or	RRJ563WAL002
	RES CHIP 1608 1/10W J 56k Ω	RRXA563HH013
R2639	CHIP RES. 1/10W J 39k Ω or	RRXAJR5Z0393
	RES CHIP 1608 1/10W J 39k Ω or	RRXA393YF002
	RES CHIP 1608 1/10W J 39k Ω or	RRJ393WAL002
	RES CHIP 1608 1/10W J 39k Ω	RRXA393HH013
R2701	RES CHIP 1608 1/10W J 470 Ω or	RRXA471HH013
	RES CHIP 1608 1/10W J 470 Ω or	RRXA471YF002
	RES CHIP 1608 1/10W J 470 Ω or	RRJ471RYL002
	RES CHIP 1608 1/10W J 470 Ω	RRJ471WAL002
R2705	RES CHIP 1608 1/10W 0 Ω or	RRXA000HH014
	RES CHIP 1608 1/10W J 0 Ω or	RRXA000YF002
	RES CHIP 1608 1/10W 0 Ω or	RRZ000RYL002
	RES CHIP 1608 1/10W 0 Ω	RRJ000WAL002
R2707	RES CHIP 1608 1/10W 0 Ω or	RRXA000HH014
	RES CHIP 1608 1/10W J 0 Ω or	RRXA000YF002
	RES CHIP 1608 1/10W 0 Ω or	RRZ000RYL002
	RES CHIP 1608 1/10W 0 Ω	RRJ000WAL002
R2709	RES CHIP 1608 1/10W J 470 Ω or	RRXA471HH013
	RES CHIP 1608 1/10W J 470 Ω or	RRXA471YF002
	RES CHIP 1608 1/10W J 470 Ω or	RRJ471RYL002
	RES CHIP 1608 1/10W J 470 Ω	RRJ471WAL002
R2710	RES CHIP 1608 1/10W J 75 Ω or	RRXA750HH013
	RES CHIP 1608 1/10W J 75 Ω or	RRXA750YF002
	RES CHIP 1608 1/10W J 75 Ω or	RRJ750RYL002
	RES CHIP 1608 1/10W J 75 Ω	RRJ750WAL002
R2711	RES CHIP 1608 1/10W 0 Ω or	RRXA000HH014
	RES CHIP 1608 1/10W J 0 Ω or	RRXA000YF002
	RES CHIP 1608 1/10W 0 Ω or	RRZ000RYL002
	RES CHIP 1608 1/10W 0 Ω	RRJ000WAL002
R2712	RES CHIP 1608 1/10W 0 Ω or	RRXA000HH014
	RES CHIP 1608 1/10W J 0 Ω or	RRXA000YF002
	RES CHIP 1608 1/10W 0 Ω or	RRZ000RYL002
	RES CHIP 1608 1/10W 0 Ω	RRJ000WAL002
R2713	RES CHIP 1608 1/10W J 560 Ω or	RRXA561HH013
	RES CHIP 1608 1/10W J 560 Ω or	RRXA561YF002
	RES CHIP 1608 1/10W J 560 Ω or	RRJ561RYL002
	RES CHIP 1608 1/10W J 560 Ω	RRJ561WAL002
R2714	RES CHIP 1608 1/10W 0 Ω or	RRXA000HH014
	RES CHIP 1608 1/10W J 0 Ω or	RRXA000YF002
	RES CHIP 1608 1/10W 0 Ω or	RRZ000RYL002
	RES CHIP 1608 1/10W 0 Ω	RRJ000WAL002
R2716	RES CHIP 1608 1/10W J 560 Ω or	RRXA561HH013
	RES CHIP 1608 1/10W J 560 Ω or	RRXA561YF002
	RES CHIP 1608 1/10W J 560 Ω or	RRJ561RYL002
	RES CHIP 1608 1/10W J 560 Ω	RRJ561WAL002
R2717	RES CHIP 1608 1/10W 0 Ω or	RRXA000HH014
	RES CHIP 1608 1/10W J 0 Ω or	RRXA000YF002
	RES CHIP 1608 1/10W 0 Ω or	RRZ000RYL002
	RES CHIP 1608 1/10W 0 Ω	RRJ000WAL002
R2719	RES CHIP 1608 1/10W J 51k Ω or	RRXA513HH013
	RES CHIP 1608 1/10W J 51k Ω or	RRXA513YF002
	RES CHIP 1608 1/10W J 51k Ω or	RRJ513RYL002
	RES CHIP 1608 1/10W J 51k Ω	RRJ513WAL002
R2720	RES CHIP 1608 1/10W J 10k Ω or	RRXA103HH013
	RES CHIP 1608 1/10W J 10k Ω or	RRXA103YF002
	RES CHIP 1608 1/10W J 10k Ω or	RRJ103RYL002
	RES CHIP 1608 1/10W J 10k Ω	RRJ103WAL002
R2721	RES CHIP 1608 1/10W 0 Ω or	RRXA000HH014
	RES CHIP 1608 1/10W J 0 Ω or	RRXA000YF002
	RES CHIP 1608 1/10W 0 Ω or	RRZ000RYL002
	RES CHIP 1608 1/10W 0 Ω	RRJ000WAL002
R2723	RES CHIP 1608 1/10W 0 Ω or	RRXA000HH014
	RES CHIP 1608 1/10W J 0 Ω or	RRXA000YF002
	RES CHIP 1608 1/10W 0 Ω or	RRZ000RYL002
	RES CHIP 1608 1/10W 0 Ω	RRJ000WAL002
R2724	RES CHIP 1608 1/10W J 100 Ω or	RRXA101HH013

Ref. No.	Description	Part No.
	RES CHIP 1608 1/10W J 100 Ω or	RRXA101YF002
	RES CHIP 1608 1/10W J 100 Ω or	RRJ101RYL002
	RES CHIP 1608 1/10W J 100 Ω	RRJ101WAL002
R2725	RES CHIP 1608 1/10W J 75 Ω or	RRXA750HH013
	RES CHIP 1608 1/10W J 75 Ω or	RRXA750YF002
	RES CHIP 1608 1/10W J 75 Ω or	RRJ750RYL002
	RES CHIP 1608 1/10W J 75 Ω	RRJ750WAL002
R2726	RES CHIP 1608 1/10W 0 Ω or	RRXA000HH014
	RES CHIP 1608 1/10W J 0 Ω or	RRXA000YF002
	RES CHIP 1608 1/10W 0 Ω or	RRZ000RYL002
	RES CHIP 1608 1/10W 0 Ω	RRJ000WAL002
R2728	RES CHIP 1608 1/10W 0 Ω or	RRXA000HH014
	RES CHIP 1608 1/10W J 0 Ω or	RRXA000YF002
	RES CHIP 1608 1/10W 0 Ω or	RRZ000RYL002
	RES CHIP 1608 1/10W 0 Ω	RRJ000WAL002
R2737	RES CHIP 1608 1/10W J 10 Ω or	RRXA100HH013
	RES CHIP 1608 1/10W J 10 Ω or	RRXA100YF002
	RES CHIP 1608 1/10W J 10 Ω or	RRJ100RYL002
	RES CHIP 1608 1/10W J 10 Ω	RRJ100WAL002
R2738	RES CHIP 1608 1/10W J 10 Ω or	RRXA100HH013
	RES CHIP 1608 1/10W J 10 Ω or	RRXA100YF002
	RES CHIP 1608 1/10W J 10 Ω or	RRJ100RYL002
	RES CHIP 1608 1/10W J 10 Ω	RRJ100WAL002
R2739	RES CHIP 1608 1/10W J 2.7k Ω or	RRXA272HH013
	RES CHIP 1608 1/10W J 2.7k Ω or	RRXA272YF002
	RES CHIP 1608 1/10W J 2.7k Ω or	RRJ272RYL002
	RES CHIP 1608 1/10W J 2.7k Ω	RRJ272WAL002
R2740	RES CHIP 1608 1/10W J 2.7k Ω or	RRXA272HH013
	RES CHIP 1608 1/10W J 2.7k Ω or	RRXA272YF002
	RES CHIP 1608 1/10W J 2.7k Ω or	RRJ272RYL002
	RES CHIP 1608 1/10W J 2.7k Ω	RRJ272WAL002
R2742	RES CHIP 1608 1/10W J 820 Ω or	RRXA821HH013
	RES CHIP 1608 1/10W J 820 Ω or	RRXA821YF002
	RES CHIP 1608 1/10W J 820 Ω or	RRJ821RYL002
	RES CHIP 1608 1/10W J 820 Ω	RRJ821WAL002
R2753	RES CHIP 1608 1/10W J 22k Ω or	RRXA223HH013
	RES CHIP 1608 1/10W J 22k Ω or	RRXA223YF002
	RES CHIP 1608 1/10W J 22k Ω or	RRJ223RYL002
	RES CHIP 1608 1/10W J 22k Ω	RRJ223WAL002
R2754	RES CHIP 1608 1/10W J 300 Ω or	RRXA301HH013
	RES CHIP 1608 1/10W J 300 Ω or	RRXA301YF002
	RES CHIP 1608 1/10W J 300 Ω or	RRJ301RYL002
	RES CHIP 1608 1/10W J 300 Ω	RRJ301WAL002
R2755	RES CHIP 1608 1/10W 0 Ω or	RRXA000HH014
	RES CHIP 1608 1/10W J 0 Ω or	RRXA000YF002
	RES CHIP 1608 1/10W 0 Ω or	RRZ000RYL002
	RES CHIP 1608 1/10W 0 Ω	RRJ000WAL002
R2757	RES CHIP 1608 1/10W 0 Ω or	RRXA000HH014
	RES CHIP 1608 1/10W J 0 Ω or	RRXA000YF002
	RES CHIP 1608 1/10W 0 Ω or	RRZ000RYL002
	RES CHIP 1608 1/10W 0 Ω	RRJ000WAL002
R2759	RES CHIP 1608 1/10W J 100k Ω or	RRXA104HH013
	RES CHIP 1608 1/10W J 100k Ω or	RRXA104YF002
	RES CHIP 1608 1/10W J 100k Ω or	RRJ104RYL002
	RES CHIP 1608 1/10W J 100k Ω	RRJ104WAL002
R2760	RES CHIP 1608 1/10W J 27k Ω or	RRXA273HH013
	RES CHIP 1608 1/10W J 27k Ω or	RRXA273YF002
	RES CHIP 1608 1/10W J 27k Ω or	RRJ273RYL002
	RES CHIP 1608 1/10W J 27k Ω	RRJ273WAL002
R2761	RES CHIP 1608 1/10W J 27k Ω or	RRXA273HH013
	RES CHIP 1608 1/10W J 27k Ω or	RRXA273YF002
	RES CHIP 1608 1/10W J 27k Ω or	RRJ273RYL002
	RES CHIP 1608 1/10W J 27k Ω	RRJ273WAL002
R2762	RES CHIP 1608 1/10W 0 Ω or	RRXA000HH014
	RES CHIP 1608 1/10W J 0 Ω or	RRXA000YF002
	RES CHIP 1608 1/10W 0 Ω or	RRZ000RYL002
	RES CHIP 1608 1/10W 0 Ω	RRJ000WAL002

Ref. No.	Description	Part No.
R2763	RES CHIP 1608 1/10W 0 Ω or	RRXA000HH014
	RES CHIP 1608 1/10W J 0 Ω or	RRXA000YF002
	RES CHIP 1608 1/10W 0 Ω or	RRZ000RYL002
	RES CHIP 1608 1/10W 0 Ω	RRJ000WAL002
R2764	RES CHIP 1608 1/10W 0 Ω or	RRXA000HH014
	RES CHIP 1608 1/10W J 0 Ω or	RRXA000YF002
	RES CHIP 1608 1/10W 0 Ω or	RRZ000RYL002
	RES CHIP 1608 1/10W 0 Ω	RRJ000WAL002
R2765	RES CHIP 1608 1/10W 0 Ω or	RRXA000HH014
	RES CHIP 1608 1/10W J 0 Ω or	RRXA000YF002
	RES CHIP 1608 1/10W 0 Ω or	RRZ000RYL002
	RES CHIP 1608 1/10W 0 Ω	RRJ000WAL002
R2766	RES CHIP 1608 1/10W 0 Ω or	RRXA000HH014
	RES CHIP 1608 1/10W J 0 Ω or	RRXA000YF002
	RES CHIP 1608 1/10W 0 Ω or	RRZ000RYL002
	RES CHIP 1608 1/10W 0 Ω	RRJ000WAL002
R2801	RES CHIP 1608 1/10W J 47k Ω or	RRXA473HH013
	RES CHIP 1608 1/10W J 47k Ω or	RRXA473YF002
	RES CHIP 1608 1/10W J 47k Ω or	RRJ473RYL002
	RES CHIP 1608 1/10W J 47k Ω	RRJ473WAL002
R2802	RES CHIP 1608 1/10W 0 Ω or	RRXA000HH014
	RES CHIP 1608 1/10W J 0 Ω or	RRXA000YF002
	RES CHIP 1608 1/10W 0 Ω or	RRZ000RYL002
	RES CHIP 1608 1/10W 0 Ω	RRJ000WAL002
R2803	RES CHIP 1608 1/10W J 10 Ω or	RRXA100HH013
	RES CHIP 1608 1/10W J 10 Ω or	RRXA100YF002
	RES CHIP 1608 1/10W J 10 Ω or	RRJ100RYL002
	RES CHIP 1608 1/10W J 10 Ω	RRJ100WAL002
R2804	RES CHIP 1608 1/10W J 10 Ω or	RRXA100HH013
	RES CHIP 1608 1/10W J 10 Ω or	RRXA100YF002
	RES CHIP 1608 1/10W J 10 Ω or	RRJ100RYL002
	RES CHIP 1608 1/10W J 10 Ω	RRJ100WAL002
R2805	RES CHIP 1608 1/10W 0 Ω or	RRXA000HH014
	RES CHIP 1608 1/10W J 0 Ω or	RRXA000YF002
	RES CHIP 1608 1/10W 0 Ω or	RRZ000RYL002
	RES CHIP 1608 1/10W 0 Ω	RRJ000WAL002
R2806	RES CHIP 1608 1/10W 0 Ω or	RRXA000HH014
	RES CHIP 1608 1/10W J 0 Ω or	RRXA000YF002
	RES CHIP 1608 1/10W 0 Ω or	RRZ000RYL002
	RES CHIP 1608 1/10W 0 Ω	RRJ000WAL002
R2809	RES CHIP 1608 1/10W J 33k Ω or	RRXA333HH013
	RES CHIP 1608 1/10W J 33k Ω or	RRXA333YF002
	RES CHIP 1608 1/10W J 33k Ω or	RRJ333RYL002
	RES CHIP 1608 1/10W J 33k Ω	RRJ333WAL002
R2810	RES CHIP 1608 1/10W J 10k Ω or	RRXA103HH013
	RES CHIP 1608 1/10W J 10k Ω or	RRXA103YF002
	RES CHIP 1608 1/10W J 10k Ω or	RRJ103RYL002
	RES CHIP 1608 1/10W J 10k Ω	RRJ103WAL002
R2811	RES CHIP 1608 1/10W J 10k Ω or	RRXA103HH013
	RES CHIP 1608 1/10W J 10k Ω or	RRXA103YF002
	RES CHIP 1608 1/10W J 10k Ω or	RRJ103RYL002
	RES CHIP 1608 1/10W J 10k Ω	RRJ103WAL002
R2812	RES CHIP 1608 1/10W 0 Ω or	RRXA000HH014
	RES CHIP 1608 1/10W J 0 Ω or	RRXA000YF002
	RES CHIP 1608 1/10W 0 Ω or	RRZ000RYL002
	RES CHIP 1608 1/10W 0 Ω	RRJ000WAL002
R2814	RES CHIP 1608 1/10W J 1.8k Ω or	RRXA182HH013
	RES CHIP 1608 1/10W J 1.8k Ω or	RRXA182YF002
	RES CHIP 1608 1/10W J 1.8k Ω or	RRJ182RYL002
	RES CHIP 1608 1/10W J 1.8k Ω	RRJ182WAL002
R2816	RES CHIP 1608 1/10W 0 Ω or	RRXA000HH014
	RES CHIP 1608 1/10W J 0 Ω or	RRXA000YF002
	RES CHIP 1608 1/10W 0 Ω or	RRZ000RYL002
	RES CHIP 1608 1/10W 0 Ω	RRJ000WAL002
R2818	RES CHIP 1608 1/10W J 10k Ω or	RRXA103HH013
	RES CHIP 1608 1/10W J 10k Ω or	RRXA103YF002
	RES CHIP 1608 1/10W J 10k Ω or	RRJ103RYL002

Ref. No.	Description	Part No.
	RES CHIP 1608 1/10W J 10k Ω	RRJ103WAL002
R2820	RES CHIP 1608 1/10W J 47k Ω or	RRXA473HH013
	RES CHIP 1608 1/10W J 47k Ω or	RRXA473YF002
	RES CHIP 1608 1/10W J 47k Ω or	RRJ473RYL002
	RES CHIP 1608 1/10W J 47k Ω	RRJ473WAL002
R2823	RES CHIP 1608 1/10W 0 Ω or	RRXA000HH014
	RES CHIP 1608 1/10W J 0 Ω or	RRXA000YF002
	RES CHIP 1608 1/10W 0 Ω or	RRZ000RYL002
	RES CHIP 1608 1/10W 0 Ω	RRJ000WAL002
R2827	RES CHIP 1608 1/10W J 1.8k Ω or	RRXA182HH013
	RES CHIP 1608 1/10W J 1.8k Ω or	RRXA182YF002
	RES CHIP 1608 1/10W J 1.8k Ω or	RRJ182RYL002
	RES CHIP 1608 1/10W J 1.8k Ω	RRJ182WAL002
	MISCELLANEOUS	
BC2602	BEADS INDUCTOR FBR07HA121SB-00 or	LLBF00STU030
	BEAD INDUCTOR B29 RID 2.3X7.5X7.5T	LLEF0S0XM002
BC2603	BEADS INDUCTOR FBR07HA121SB-00 or	LLBF00STU030
	BEAD INDUCTOR B29 RID 2.3X7.5X7.5T	LLEF0S0XM002
F2601	RES CHIP 1608 1/10W 0 Ω or	RRXA000HH014
	RES CHIP 1608 1/10W J 0 Ω or	RRXA000YF002
	RES CHIP 1608 1/10W 0 Ω or	RRZ000RYL002
	RES CHIP 1608 1/10W 0 Ω	RRJ000WAL002
F2602	FUSE CHIP FMC16302AHTP	PDDFMC0KE302
F2603	FUSE CHIP FMC16302AHTP	PDDFMC0KE302
JK2701	JACK RGB PCB S 21/RGB-55H	JXGJ21YUQ002
JK2702	JACK RCA PCB S WHITE 01/RCA-101H(WH) or	JXRJ010YUQ02
	JACK RCA PCB S (WHITE) 01 MTJ-032-04B-41 FE or	JXRJ010LY031
	JACK RCA PCB S WHITE 01 / RCA-101HF(WH)	JXRJ01YUQ008
JK2703	JACK SW RCA PCB S RED RCA-102H(RD) or	JYRJ010YUQ03
	JACK SW RCA PCB S(RED) 01 MTJ-032-04A-75 FE	JYRJ010LY031
JK2704	JACK RCA PCB S GREEN 01/RCA-101H(GN) or	JXRJ010YUQ03
	JACK RCA PCB S(GREEN) 01 MTJ-032-04B-73 FE or	JXRJ010LY030
	JACK RCA PCB S GREEN 01 / RCA-101HF(GN)	JXRJ01YUQ009
JK2705	JACK RCA PCB S BLUE 01/RCA-101H(BL) or	JXRJ010YUQ04
	JACK RCA PCB S(BLUE) 01 MTJ-032-04B-74 FE or	JXRJ010LY033
	JACK RCA PCB S BLUE 01 / RCA-101HF(BL)	JXRJ01YUQ010
JK2706	JACK SW RCA PCB S RED RCA-102H(RD) or	JYRJ010YUQ03
	JACK SW RCA PCB S(RED) 01 MTJ-032-04A-75 FE	JYRJ010LY031
JK2707	JACK HPEP SML PCB S PJ-358H or	JXSJ020YUQ01
	JACK HPEP SML PCB S 02 MSJ-035-29D (ABS)	JXSJ020LY001
JK2708	JACK SW HPEP SML PCB L PJ-350 or	JYSL010YUQ03
	JACK SW HPEP SML PCB L MSJ-2000 AG(B110)	JYSL010LY005
JK2709	JACK RCA PCB S ORANGE 01/RCA-101H(OR) or	JXRJ010YUQ06
	JACK RCA PCB S(ORANGE) 01 MTJ-032-04B-76 FE	JXRJ010LY029
JS2601	WIRE COPPER 6111-06003-0120 or	XZ40C0SHG002
	WIRE COPPER JP0.6MM	XZ40C0AKM001
JS2801	WIRE COPPER 6111-06003-0120 or	XZ40C0SHG002
	WIRE COPPER JP0.6MM	XZ40C0AKM001
JW2401	WIRE COPPER 6111-06003-0120 or	XZ40C0SHG002
	WIRE COPPER JP0.6MM	XZ40C0AKM001

FUNCTION CBA

Ref. No.	Description	Part No.
	FUNCTION CBA Consists of the following:	---------
	CAPACITORS	
C2150	CHIP CERAMIC CAP.(1608) F Z 0.1 F/50V or	CHD1JZ30F104
	CAP CHIP 1608 Z/Y5V/0.1 F/50V	CHD104EYA036
	RESISTORS	
R2150	RES CARBON FILM T 1/4W G 6.8k Ω or	RCX4682T1002
	RES CARBON FILM 1/4W G 6.8k Ω	RCG682PAK001
R2151	RES CARBON FILM T 1/4W G 3.0k Ω or	RCX4302T1002
	RES CARBON FILM 1/4W G 3.0k Ω	RCG302PAK001
R2152	RES CARBON FILM T 1/4W G 1.8k Ω or	RCX4182T1002
	RES CARBON FILM 1/4W G 1.8k Ω	RCG182PAK001
R2153	RES CARBON FILM T 1/4W G 1.0k Ω or	RCX4102T1002
	RES CARBON FILM 1/4W G 1.0k Ω	RCG102PAK001
R2154	RES CARBON FILM T 1/4W G 680 Ω or	RCX4681T1002
	RES CARBON FILM 1/4W G 680 Ω	RCG681PAK001
R2155	RES CARBON FILM T 1/4W J 330 Ω or	RCX4331T1001
	RES CARBON FILM 1/4W J 330 Ω or	RCX4331FS002
	RES CARBON FILM 1/4W J 330 Ω	RCJ331PAK001
R2156	RES CARBON FILM T 1/4W G 1.0k Ω or	RCX4102T1002
	RES CARBON FILM 1/4W G 1.0k Ω	RCG102PAK001
	SWITCHES	
SW2150	TACT SWITCH SKQSAB or	SST0101AL038
	TACT SWITCH KSM0612B	SST0101HH003
SW2151	TACT SWITCH SKQSAB or	SST0101AL038
	TACT SWITCH KSM0612B	SST0101HH003
SW2152	TACT SWITCH SKQSAB or	SST0101AL038
	TACT SWITCH KSM0612B	SST0101HH003
SW2153	TACT SWITCH SKQSAB or	SST0101AL038
	TACT SWITCH KSM0612B	SST0101HH003
SW2154	TACT SWITCH SKQSAB or	SST0101AL038
	TACT SWITCH KSM0612B	SST0101HH003
SW2155	TACT SWITCH SKQSAB or	SST0101AL038
	TACT SWITCH KSM0612B	SST0101HH003
SW2156	TACT SWITCH SKQSAB or	SST0101AL038
	TACT SWITCH KSM0612B	SST0101HH003

IR SENSOR CBA

Ref. No.	Description	Part No.
	IR SENSOR CBA Consists of the following:	---------
	CAPACITORS	
C2160	CHIP CERAMIC CAP.(1608) B K 0.1 F/16V	CHD1CK30B104
C2161	CHIP CERAMICCAP B M 10 F 6.3V or	CHD0KM30B106
	CAP CHIP 1608 B M 10 F/6.3V	CA0K106TE073
C2162	CHIP CERAMICCAP B M 10 F 6.3V or	CHD0KM30B106
	CAP CHIP 1608 B M 10 F/6.3V	CA0K106TE073
C2163	CHIP CERAMIC CAP. F Z 0.01 F/50V	CHD1JZ30F103
C2164	CHIP CERAMIC CAP.(1608) B K 0.1 F/16V	CHD1CK30B104
C2165	CHIP CERAMIC CAP.(1608) B K 0.1 F/16V	CHD1CK30B104
C2166	CHIP CERAMICCAP B M 10 F 6.3V or	CHD0KM30B106
	CAP CHIP 1608 B M 10 F/6.3V	CA0K106TE073
C2167	CHIP CERAMIC CAP.(1608) B K 0.1 F/16V	CHD1CK30B104
	DIODES	
D2161	LED(RED) LTL-1CHEE or	NPQZLTL1CHEE
	LED(RED) 1254IT	NPQZ0012541T
	IC	
IC2161	O-E DEVICE PHOTO TRANSISTOR JSA-3113B	NPWZJSA3113B
	RESISTORS	
R2160	RES CHIP 1608 1/10W J 3.3k Ω or	RRXA332HH013
	RES CHIP 1608 1/10W J 3.3k Ω or	RRXA332YF002
	RES CHIP 1608 1/10W J 3.3k Ω or	RRJ332RYL002
	RES CHIP 1608 1/10W J 3.3k Ω	RRJ332WAL002
R2161	RES CHIP 1608 1/10W J 1.0k Ω or	RRXA102HH013
	RES CHIP 1608 1/10W J 1.0k Ω or	RRXA102YF002

Ref. No.	Description	Part No.
	RES CHIP 1608 1/10W J 1k Ω or	RRJ102RYL002
	RES CHIP 1608 1/10W J 1.0k Ω	RRJ102WAL002
R2163	RES CHIP 1608 1/10W J 2.4k Ω or	RRXA242HH013
	RES CHIP 1608 1/10W J 2.4k Ω or	RRXA242YF002
	RES CHIP 1608 1/10W J 2.4k Ω or	RRJ242RYL002
	RES CHIP 1608 1/10W J 2.4k Ω	RRJ242WAL002
R2164	RES CHIP 1608 1/10W J 330k Ω or	RRXA334HH013
	RES CHIP 1608 1/10W J 330k Ω or	RRXA334YF002
	RES CHIP 1608 1/10W J 330k Ω or	RRJ334RYL002
	RES CHIP 1608 1/10W J 330k Ω	RRJ334WAL002
R2165	RES CHIP 1608 1/10W J 100 Ω or	RRXA101HH013
	RES CHIP 1608 1/10W J 100 Ω or	RRXA101YF002
	RES CHIP 1608 1/10W J 100 Ω or	RRJ101RYL002
	RES CHIP 1608 1/10W J 100 Ω	RRJ101WAL002
R2166	RES CHIP 1608 1/10W J 220 Ω or	RRXA221HH013
	RES CHIP 1608 1/10W J 220 Ω or	RRXA221YF002
	RES CHIP 1608 1/10W J 220 Ω or	RRJ221RYL002
	RES CHIP 1608 1/10W J 220 Ω	RRJ221WAL002
R2167	RES CHIP 1608 1/10W J 220 Ω or	RRXA221HH013
	RES CHIP 1608 1/10W J 220 Ω or	RRXA221YF002
	RES CHIP 1608 1/10W J 220 Ω or	RRJ221RYL002
	RES CHIP 1608 1/10W J 220 Ω	RRJ221WAL002
MISCELLANEOUS		
CL2161	WIRE ASSEMBLY 2PIN 2PIN/155MM/AWG28/RB	WX1A13P0-222
CL2162	WIRE ASSEMBLY 7PIN 7PIN/680MM/AWG28/RB	WX1A13P0-221
RS2161	SENSOR REMOTE RECEIVER KSM-2002TN2M-FU	USEJRS0KK009

Ref. No.	Description	Part No.
	POWER SUPPLY CBA UNIT	UPBPSPFSP004
TU2301	TUNER UNIT TDTK-G731D	UTNPSG0GS001

LED40-H9200M
A13P0EP
2011-06-09
Ver.1